02-05-02

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

09/835,884 2673

#2

In re Patent Application of:		
Applicant:	Arthur H. Sarkissian	Group Art Unit: 2673
Serial No.:	09/835,884	Examiner: Bipin Shalwala
Filed:	April 16, 2001	
Title:	KEY-SURROUND MODULE INPUTTING DEVICE	

Commissioner for Patents
Washington, D.C. 20231

PETITION TO MAKE SPECIAL UNDER 37 C.F.R. 1.102(d)

Applicant hereby petitions the Commissioner under 37 C.F.R. 1.102(d) that the above-mentioned application be advanced out of turn for examination and be accorded "special" status.

This application has not yet been examined by the Office.

The ground for this petition is that it appears that applicant's invention, as claimed in this application, is currently being infringed.

The petition fee required pursuant to 37 C.F.R. 1.17(h) is enclosed.

The pertinent conditions for the advancement of examination are found in MPEP 708.02, parts II and VIII. The conditions in part II are that a statement be made by applicant alleging:

(A) That there is an infringing device or product actually on the market;

(B) That a rigid comparison of the alleged infringing device with the claims of the application has been made and that, in applicant's opinion, some of the claims are unquestionably infringed; and

(C) That applicant has made or caused to be made a careful and thorough search of the prior art.

The additional conditions for accelerated examination of new applications, as set forth in MPEP 708.02, part VIII, are that applicant must:

(A) Submit a petition to make special accompanied by the fee set forth in 37 C.F.R. 1.17(h);

(B) Present all claims directed to a single invention;

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(C) Submit a statement that a pre-examination search was made, listing the field of search by class and subclass;

(D) Submit one copy each of the references deemed most closely related to the subject matter encompassed by the claims; and

(E) Submit a detailed discussion of the references, which discussion points out, with the particularity required by 37 C.F.R. 1.111(b) and (c), how the claimed subject matter is patentable over the references.

In support of this petition, applicant submits the enclosed Statement, with attachments and copies of the prior art references deemed most closely related to the claimed subject matter.

Applicant believes that all of the necessary conditions for this petition have been satisfied. Accordingly, applicant requests that this petition to make special be granted and that the application undergo accelerated examination.

Respectfully submitted,

Arthur H. Sarkissian

Dated: January 31, 2002

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STATEMENT IN SUPPORT OF PETITION TO MAKE SPECIAL

Arthur H. Sarkissian states as follows:

1. I am the applicant in the above-identified patent application.

2. I make this statement in support of my Petition to Make Special filed concurrently herewith. All statements herein are with my personal knowledge and are true, to the best of my knowledge.

Summary of the Application

3. All claims in this application are directed to a single invention.

4. The subject matter of the above-identified application relates to a novel finger-operated inputting device invented by me that may be used with any computer, personal digital assistant, portable music player or related electronic device. I filed the application myself on April 16, 2001. A copy of the application is attached hereto as **Exhibit A**. A copy of the Filing Receipt that I received from the U.S. Patent and Trademark Office is attached as **Exhibit B**.

5. One important feature of an embodiment of my invention is a "bulls-eye" shaped inputting device or module also describable as a "nested key" or a "key-surround module". (See, for example, FIGS. 1a-1b and FIG. 2 of my application, **Exhibit A**). In one such embodiment a plurality of finger-operated concentric rings or inputting zones are provided, each of which is independently actionable or operable. Each ring or zone may have either a continuous surface as in FIG. 1a or a segmented surface with a plurality of key areas, as in FIG. 2, part A, or a combination thereof.

6. I invented the above-mentioned feature with, but not limited to, the following two objects: sensory instructiveness and space creation. What is meant by sensory instructiveness is that by its

appearance, structure and tactility, my nested-key, "bulls-eye" or key-surround module inputting device as disclosed and claimed conveys useful information to the user and overcomes many problems of prior art inputting devices. Upon first glance it is clear to the user that one finger can operate a module of my invention, and, that the one finger will input exclusively upon or among, for example, only three inputting key structures or zones. Thus, the appearance and structure of the "bulls-eye", nested key or key-surround module of my invention suggests its method of use. A stark contrast is prior art inputting devices which by their appearance and structures give no such visual guidance and even confuse both experienced user and novice, prompting them to make inputting mistakes and making learning difficult. Often the user of such prior art inputting devices is not aware that she is inputting on a particular key because each key is one of a multitude of identically structured and indistinguishable keys. The user can quickly visually differentiate the keys of my invention. Moreover, having easily memorized key locations in, for example, a "bulls-eye" module, the user need not even look at the inputting device but only feel for these nested keys in order to confirm that she has her finger on the correct key. Inputting mistakes are thereby prevented and there is less cause for repetition and frustration. Additionally, on page 7 of my application, I disclose an embodiment of nested key rings or zones with varying heights, inclines and textures with respect to one another and the inputting surface, making such keys easier to identify with only one's sense of touch. The sensory instructiveness of my invention as disclosed in my application provides previously unavailable benefits to the user and solves many problems of prior art inputting devices.

7. A second object of the nested key or "bulls-eye" inputting module of my invention, that of space creation, refers to the provision of previously unavailable inputting space as well as to the augmentation of inputting space for each key value. A "bulls-eye", nested key or key-surround module as disclosed and claimed in my application creates a concentrated inputting surface area for use with portable and non-portable electronic devices while increasing inputting efficiency and comfort. My inputting device melts inefficiently structured keys and inefficiently placed key values of prior art inputting devices into fluid nested keys and key-surroundings, thereby eliminating wasted spaces among keys and key values. Prior art inputting devices due to their construction, structure and inefficiently shaped keys contain much unused space. The use of space in prior art inputting devices limits the amount of key values that can be inputted and also limits the amount of space allotted to each key value. My inputting device creates new space which can be utilized for the extension of keys or areas of key value inputting, thereby, increasing user comfort by allowing inputting which is not as constrained and exacting as that which is required with prior art. Additionally, more key values can be incorporated than can be with prior art inputting devices. Prior art hard-to-reach key value areas, may for example, are brought closer to the center of a "bulls-eye" or nested key or key-surround thereby making more keys more accessible, and thus, affording more ease and enjoyment to the user. Space creation thus provided by my invention provides previously unavailable benefits to the user and solves many problems of prior art inputting devices.

8. The above-described features, objects and purposes of sensory instructiveness and space creation in paragraphs 5,6 and 7 should not be interpreted to limit my invention as disclosed or claimed, or to be considered exhaustive descriptions in themselves of such features, objects and purposes. Rather, they are herein provided for a brief explanation of the spirit of my invention as may be necessary or useful for an understanding of the infringement analysis below.

Infringement Analysis

9. I believe that at least some of the claims of my application are actually being infringed by another product presently on the market. The product is the recently available portable electronic "iPod", currently being manufactured and sold by Apple Computer, Inc. ("Apple") of Cupertino, CA.

The specific feature of the product believed to be infringing is a circular, bulls-eye shaped, finger-operated inputting module device located on its face.

10. The Apple iPod product is described in a current Apple pamphlet that is available to the public, a sample of which is attached hereto as **Exhibit C1**. The infringing inputting device is shown quite clearly in a picture of the product on the front of this pamphlet. I received this pamphlet personally on November 28, 2001 from the CompUSA retail computer store on Fifth Avenue and 39th Street in New York City. Also attached as **Exhibits D1 and D2** are 3 photographs taken by me on December 6, 2001 of large advertising signs recently posted by or on behalf of Apple in several prominent locations around New York City, including Times Square and of retail stores where the product is currently being sold, including the above-mentioned CompUSA store. These photographs all show the infringing feature clearly. The last photograph also shows that this Apple product is currently available for inspection and use by the public at the CompUSA store.

11. The Apple iPod product was released on October 23, 2001. Attached as **Exhibit E** is a copy of a page describing the product that is currently posted on the Apple Computer Web site at www.apple.com. I first learned about the product on November 25, 2001.

12. I have personally reviewed the Apple iPod product pamphlet attached herein as **Exhibit C1** describing the major features of the product. In addition, on November 28, 2001, I went to the above-mentioned CompUSA retail store and personally examined the product, and I found that, based on both the appearance and functionality of the product, it appears to actually infringe my claimed invention. Although I have not looked inside the product to examine the internal mechanics or electronics of the device, based on my review of the product pamphlet, my personal examination of the device and my personal knowledge of how inputting devices generally work, it is my opinion that the inputting device of the Apple iPod product unquestionably infringes at least some of the claims of my application. In particular, the finger-operated, "bulls-eye" shaped (concentric circular) inputting device on the front of the Apple iPod product appears to have the same structure and function as the invention claimed in my application.

13. It should be noted that whereas an exact visual duplicate of the infringing device is not contained in the figures of my application, the infringing device is clearly contemplated and disclosed in my specification and in my claims. Attached hereto as **Exhibit C2** and **Exhibit C3** are two illustrations or two visual comparisons of the infringing device and two different embodiments found as figures in my application. The former illustrates the Apple iPod and FIG. 1a exactly as it appears in my application. Obvious continuous circular inputting surfaces and near identical shapes are clearly similar. Even the three varieties of shading contained in FIG. 1a, each representing levels, inclines and texturizations of its three different inputting zones appear in the Apple iPod product. The only difference here is that the outermost key ring of the Apple iPod is of segmented keys. But that this segmentation of keys in a circular ring format was also contemplated as a module embodiment in my application is found in the comparison illustration of the Apple iPod and Figure 2 from my application attached hereto as **Exhibit C3**. My FIG. 2, an alternate embodiment of the same "bull-eye" module format, depicts segmented keys arranged as a ring unit or a key-surround. My FIG. 2 with its nested circular key and key-surrounds with segmented outer ring is quite similar to that of the inputting device produced by Apple. It may be said that a more exact visual representation of the inputting device on the face of the Apple iPod would be a combination of the keys of my FIGS. 1a and Figure 2. In addition to the structures, FIG. 2 keys are all labeled for an embodiment of alphanumeric and function key inputting as is the outermost ring of the Apple iPod inputting device and keys of FIG. 1 are not so labeled at all as are the two centermost key units of the Apple iPod inputting device. However, it should be emphasized that FIG. 1a and FIG. 2 are not to be construed in my application as being

mutually exclusive illustrations, whereas the figures of my application are not illustrations of all that is disclosed in my application. As disclosed, my invention contemplates all combinations of FIG. 1 and 2 as well as much more. And that such combinations are contemplated is clear from the following statement on page 4 of my specification: "An FP-KSM, FP-KSMs, a KA-KSM, KA-KSMs may in part, individually, in plurality, in combination or a combination thereof comprise a KSM", whereas "KSM" abbreviates "key-surround module", an "FP-KSM" abbreviates "floating pivotable key-surround module" and "KS-KSM" abbreviates "key-arrangement key-surround module". The above examples of language and illustration, while not to be interpreted as limiting that which is disclosed as my invention, clearly illustrate the visual and structural similarities between the Apple iPod inputting device and those contemplated by my inputting device invention.

It should also be noted that it is not dispositive that the Apple iPod inputting device inputs information into what primarily operates a portable music player and portable hard-drive. The term "inputting device" as stated on page 3 of my application refers to "any device which is used to input information of any kind into a computer or machine,...electrically, mechanically, or a combination thereof." Whereas the Apple iPod inputting device is used to input information into the Apple iPod portable computer, it is thus contemplated by my patent application.

14. In my opinion, the inputting device of the Apple iPod actually infringes at least some claims of my application.

It should be noted here that Claim 1 and Claim 2 which follows are reproduced in redacted form for the reason of highlighting cases of infringement by the Apple iPod inputting device. The satisfied elements of the claim are reproduced. Where other elements or combinations thereof do not apply and whereas their omission is not dispositive to satisfying the claim, they have been omitted. The following is Claim 1 from page 17 of my application, redacted in order to clarify and emphasize the required elements of Claim 1 that are particularly relevant to the infringement by the Apple iPod product:

> "1. A key-surround module inputting device comprised of:
> a capacitive key,...a pointer-navigating device,...or a combination thereof,
> and
> ... a key-arrangement inputting key-surrounding, ...not limited to resting concentric with regard to the above...,...not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating key construct,...a plurality of key actuating constructs, or a combination thereof beneath."

For purposes of illustration, a picture of the front of the Apple iPod product is reproduced and attached hereto as **Exhibit C4**, with the elements of its inputting device labeled for reference. Referring to **Exhibit C4**, it is clear that Claim 1 of my application is actually infringed by the Apple iPod product for at least the following: Central key **1** is a form of capacitive key where the user's finger does not directly cause a contact, as with that of a touch screen, for example. Key **1** is most probably one which utilizes a concave rubber disk beneath which causes an electrical contact when its key top is pressed. This I conclude from my personal knowledge of inputting devices and inputting keys as well as from my personal use of the Apple iPod inputting device, particularly with regard to the feel of the key while it is pressed and released. Key **2** is a pointer-navigating device. This was discoverable upon my personal use of the key and from the iPod product pamphlet herein attached as **Exhibit C1**. Key **3** can simply be described as an arrangement of keys unified as one inputting surrounding. In my application I describe on page 4 such a key as one having the quality of permitting "inputting a plurality of key values,...on the same key-surrounding", which is accessible from the same "central" key. Here key **3** of the Apple iPod inputting device with its plurality of four of key values are all collectively of one key-surrounding which is accessible from the same central keys, key **1** or key **2**. As set out in Claim 1,

key **3** also rests concentric to key **1,** and to key **2** separately as well as to a combination thereof, and is also circular in shape. Key **3** also has a plurality of four capacitive key actuating constructs beneath; one for each arrangement key. This was also discoverable from the feel of key **3** upon my personal use of the Apple iPod. Whereas the foregoing required elements of Claim 1 are satisfied, the Apple iPod inputting device actually infringes Claim 1 of my application.

15. A second case of infringement by the Apple iPod inputting device exists for Claim 1 of my application. The following is Claim 1 from page 17 of my application, redacted in order to clarify and emphasize the required elements of Claim 1 that are particularly relevant to the infringement by the Apple iPod product:

> "1. A key-surround module inputting device comprised of:
> a capacitive key...
> and
> ... key-arrangement inputting key-surrounding,...not limited to resting concentric with regard to the above...,...not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating key construct,...a plurality of key actuating constructs, or a combination thereof beneath."

Referring to **Exhibit C4**, it is clear that Claim 1 of my application is actually infringed by the Apple iPod product for at least the following: Central key **1** is a form of capacitive key as described above. Key **3** is a key-arrangement inputting key-surrounding also as described above. Key **3** provides inputting a plurality of key values, on the same key-surrounding accessible from the same "central" key, key **1**. Key **3** also rests concentric to key **1**, surrounds key **1**, and is circular in shape. Key **3** also has a plurality of capacitive key actuating constructs beneath as described above. Whereas the foregoing required elements of Claim 1 are satisfied, the Apple iPod inputting device actually infringes Claim 1 of my application.

16. A third case of infringement by the Apple iPod inputting device exists with regard to Claim 1 of my patent application. The following is Claim 1 from page 17 of my application, redacted in order to clarify and emphasize the required elements of Claim 1 that are particularly relevant to the infringement by the Apple iPod product:

> "1. A key-surround module inputting device comprised of:
> ...a pointer-navigating device...
> and
> ... a key-arrangement inputting key-surrounding,...not limited to resting concentric with regard to the above...,...not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating key construct,...a plurality of key actuating constructs, or a combination thereof beneath."

Referring to **Exhibit C4**, it is clear that Claim 1 of my application is actually infringed by the inputting device of Apple iPod product for at least the following reasons: Key **2** is a pointer-navigating device as described above. Key **3** is a key-arrangement inputting key-surrounding also as described above. Key **3** provides the inputting of a plurality of key values on the same key-surrounding which is accessible from the same "central" key, which in this case is key **2**. Key **3** also rests concentric to key **2**, surrounds key **2**, and is circular in shape. Key **3** also has a plurality of capacitive key actuating constructs beneath as concluded above. Whereas the foregoing required elements of Claim 1 are satisfied, the Apple iPod inputting device actually infringes Claim 1 of my application.

17. The Apple iPod inputting device also infringes actually Claim 2 of my application. The following is Claim 2 on page 17 of my application, redacted in order to clarify and emphasize the required elements of Claim 2 of my application that are particularly relevant to the infringement by the Apple iPod product:

> "2. A key-surround module inputting device comprised of:
> a capacitive key,...a pointer-navigating device,...or a combination thereof,
> and
> ... a key-arrangement inputting key-surrounding,...not limited to resting concentric with regard to the above...,...not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating key construct,...a plurality of key actuating constructs, or a combination thereof beneath,
> and
> a support or supports which contains or contain the above, individually, in any unit, in units or a combination thereof, enabling any of the above to rotate individually, in any unit, in units or a combination thereof,..."

Referring to **Exhibit C4**, it is clear that Claim 2 of my application is actually infringed by the Apple iPod product for at least the following: Central key **1** is a form of capacitive key as described above. Key **2** is a pointer-navigating device as described above. Key **3** is a key-arrangement inputting key-surrounding as described above. Key **1** is supported individually due to its key construction below which contains it and due to its attachment at all sides to the interior of key **2**. This was discovered upon my observation of the Apple inputting device while rotating key **2**. When key **2** is rotated one can feel that this entire key-surround is supported at all points beneath since pressing key **2** does not raise any of its opposing edges. From my personal use of key **2** I can conclude that it is traveling within a track or a system which both supports key **2** and contains key **2** in a way such that it allows a controlled rotation. Referring to **Exhibit C4** and my personal inspection of the Apple iPod inputting device, it is evident that key **3** is also supported at its entire circumference in a unit by the surface of the Apple iPod encasement. It is clear also from my personal inspection that the key-arrangement key surround **3** is also supported beneath and in between each of its key-arrangement keys by a support or supports which contain the entire key unit in its circular key-surround configuration. Whereas the foregoing required elements of Claim 2 are satisfied, the Apple iPod inputting device actually infringes Claim 2 of my application.

18. A second case of infringement by Apple iPod inputting device exists with regard to Claim 2 of my patent application. The following is Claim 2 on page 17 of my application, redacted in order to clarify and emphasize the required elements of Claim 2, as they are particularly relevant to the infringement by the Apple iPod product:

> "2. A key-surround module inputting device comprised of:
> a capacitive key...,
> and
> ... a key-arrangement inputting key-surrounding,...not limited to resting concentric with regard to the above...,...not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating key construct,...a plurality of key actuating constructs, or a combination thereof beneath,
> and
> a support or supports which contains or contain the above, individually, in any unit, in units or a combination thereof,..."

Referring to **Exhibit C4**, it is clear that Claim 2 of my application is actually infringed by the inputting device of the Apple iPod product, for at least the following: Central key **1** is a form of capacitive key as described above. Key **3** is a key-arrangement inputting key-surrounding as described above. Key **3** also rests concentric to key **1**, surrounds key **1**, and is circular in shape. Key **3** also has a plurality of capacitive key actuating constructs beneath as described above. Key **1** is supported individually due to its key construction beneath and by its attachment to key **2** discoverable as described above. Key **3** is supported at its entire circumference, beneath and in between its arrangement of keys also as described above. Whereas the foregoing required elements of Claim 2 are satisfied, the Apple iPod inputting device actually infringes Claim 2 of my application.

19. A third case of infringement by the Apple iPod inputting device exists with regard to Claim 2 of my patent application. The following is Claim 2 on page 17 of my application, redacted in order to clarify and emphasize the required elements of Claim 2, as they are particularly relevant to the infringement by the Apple iPod product:

> "2. A key-surround module inputting device comprised of:
> ...a pointer-navigating device...
> and
> ... a key-arrangement inputting key-surrounding,...not limited to resting concentric with regard to the above...,...not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating key construct,...a plurality of key actuating constructs, or a combination thereof beneath,
> and
> a support or supports which contains or contain the above, individually, in any unit, in units or a combination thereof, enabling any of the above to rotate individually, in any unit, in units or a combination thereof,..."

Referring to **Exhibit C4**, it is clear that Claim 2 of my application is actually infringed by the inputting device of the Apple iPod product for at least the following: Key **2** is a pointer-navigating device as described above. Key **3** is a key-arrangement inputting key-surrounding as described above. Key **3** also rests concentric to key **2**, surrounds key **2**, and is circular in shape as described above. Key **3** also has a plurality of capacitive key actuating constructs beneath as described above. Key **2** is supported as to enable its rotation as described above. Key **3** is supported as described above. Whereas the foregoing elements of Claim 2 are satisfied, the Apple iPod inputting device actually infringes Claim 2 of my application.

20. Interpretations in this statement of terms contained in my application are not to be construed as limiting the scope of the meanings of such terms for purposes of interpreting what is disclosed in my application.

21. In view of the above analysis, and since required elements of Claims 1 and 2 are found in the Apple iPod product, the Apple iPod inputting device actually infringes Claims 1 and 2 of my application.

Prior Art Searches and Analysis

22. I have performed or caused to be performed at least 4 pre-examination searches of the prior art in the records of the U.S. Patent and Trademark Office. Some searches were performed manually and some searches were performed by computer using a number of different keywords at the U.S. patent database at the USPTO Web site. The classes and subclasses searched were: 341/22;

345/168; 364/709.2; 400/82; 400/468; 400/472-477; 400/485; 400/486; 400/489; 400/492; D14/100.

23. The most relevant references for this application appear to be the following US patents:

Willner et al. 5,984,548
Willner et al. 5,874,906
Willner et al. 6,288,709
Leu et al. 6,084,576
Motoyama et al. 6,103,979
Grant 5,416,498
Cheng et al. 6,211,878

Copies of the above patents are attached hereto as **Exhibit F**.

24. The three Willner et al. patents relate to ergonomic data entry systems. They are primarily intended to function as video game controllers, but they can also control a computer with a keyboard entry mode. Attention is directed to FIG. 4, particularly elements 110 and 112, and column 4, line 25 to column 5, line 47. The patent discloses a pair of multi-directional switch assemblies, also called "D-pads." These appear to be circular disks operable by the thumbs of both hands. Pressing on the outsides of the D-pad disks causes different actions to occur, such as the generation of a keyboard character or the movement of a cursor. The switches are surrounded by concentric arcs of other switches and buttons, such as items 202. At first glance, these structures appear similar to my Key-Surround Module shown in FIG. 2 of the present application. Upon closer inspection, however, the structure and function of my invention is different. For example, the modules of one embodiment of my invention may consist of three or more concentric rings or inputting zones (or other shapes), each of which is independently actionable. See FIGS. 1a and 1b. Some or all of the rings or zones may also be segmented, as shown in FIG. 2. Each ring or zone may be depressed at any of various points around its edge. Each different point causes a different character to be generated on a screen, or causes a cursor to move in a different direction on a screen. In addition, not only do my rings or zones rock back and forth (in one embodiment) upon the application of pressure from a finger, but each of my rings or zones may also be rotated around a central axis with a finger. See page 16, lines 1-6 of my specification. Moreover, one embodiment of my invention provides for a hole in the center of the module that can accommodate an independently-operable click button, trackball or other device. It does not appear that the Willner references employ a central hole in elements 110 or 112.

25. The Leu et al. patent shows a specialized keyboard, with various groupings of keys arranged roughly in the shape of two hands. Attention is directed to FIGS. 23-25, particularly element 37. This is a wheel-shaped switch assembly with a plurality of switches arranged in a circle. The individual switch elements can operate different functions, including cursor control arrows. See also FIG. 35. However, the structures 37 of Leu et al. do not consist of concentric, independently actionable rings or zones, like one embodiment of my invention discloses. Also, the structures 37 are not shown as smooth rings. The Key-Surround Module of my invention can consist either of concentric smooth rings or zones (FIGS. 1a and 1b), or of concentric segmented rings or zones (FIG. 2). It is also noted that the keyboard of Leu et al. is not arranged in the traditional QWERTY typewriter arrangement, whereas one embodiment of my invention is. Attention is directed to FIG. 3a of my application. Although this embodiment of my keyboard does not consist of straight parallel rows of keys, if the arrangements of the letters on my ring and oval modules are examined closely, it will be noticed that the relative locations of the "keys" or key areas does follow the basic QWERTY layout. In other words, the basic keyboard geography of one embodiment of my invention is QWERTY so that the user is not required to memorize a new key layout.

26. The Motoyama et al. patent shows a specialized keyboard where each key operates more than one letter. Each key appears to be basically a rocker switch. See FIG. 12. It appears that only 2 directions are functional. I do not see a disclosure in this patent of the multiple, concentric, independently actionable rings or inputting zones embodiment of my invention.

27. The Grant patent shows a specialized keyboard with the function keys F1, F2, etc. arranged in a circle around a central cursor control button. See element 32 of FIG. 1. Only 4 cursor directions are shown, whereas my invention can operate the cursor in any direction. Also, the trackball 60 is located in a separate place, not in the middle of function key wheel 32. Thus, I do not see a disclosure in Grant of the multiple, concentric, independently actionable rings or inputting zones embodiment of my invention.

28. The Cheng et al. patent shows a video remote control device. Attention is directed to FIG. 3, element 66. This is a "scroll wheel" that can be rotated right or left with a finger. The operation of the wheel is shown in FIGS. 4, 9 and 10. As I understand the patent, when the wheel is rotated, the screen "scrolls," in the sense that different HTML links on a Web page are highlighted and selected sequentially. In other words, the user can "tab" down or up, and jump from link to link on the page by turning the wheel. It is not clear whether the entire screen moves up or down when the wheel is rotated. In any event, I do not see a disclosure in Cheng et al. of the multiple, concentric, independently actionable rings or inputting zones embodiment of my invention.

29. To summarize, I believe that the present application is distinguishable from the above-mentioned references. Thus, it is my opinion that this application is not anticipated by any of the found references, and that the claims of the application would not have been obvious over any of the found references taken either singly or in combination. Therefore, I believe that all of the claims in my application present allowable subject matter.

Conclusion

30. Accordingly, pursuant to 37 C.F.R. § 1.102 and MPEP 708.02, and in light of the prior art analysis and infringement analysis discussed above, I respectfully request that my Petition to Make Special be granted and that my application be advanced out of turn for examination.

Respectfully submitted,

Arthur H. Sarkissian

Dated: January 31, 2002

EXHIBIT A
TITLE OF INVENTION

Key-Surround Module Inputting Device.

REFERENCES CITED

Patent No. 3, 499,515	03/1970	Mikrut.....197/98
Patent No. 4, 579,470	04/1986	Casey.....400/486
Patent No. 4, 597,681	07/1986	Hodges.....400/488

BACKGROUND

The present invention relates to an inputting device, and more particularly to the novel Key-Surround Module (Hereinafter KSM) inputting device whereby a key, keys, key-arrangement key-surrounding or key-surroundings, floating pivotable key-surrounding or key-surroundings or a combination thereof is or are fully or partially surrounded by a key, keys, a key-arrangement key-surrounding or key-surroundings, floating pivotable key-surrounding or key-surroundings or a combination thereof, which can be described as a module or modules.

The following paragraph provides a mere clarification of the meaning of terms as used throughout the specification and the claims:

The term "inputting device" may refer to any device which is used to input information of any kind to a computer or machine with keys of any sort used to convey information, values or instruction electrically, chemically, magnetically, mechanically or a combination thereof. The term "rest-position keys" may refer to key value areas on an inputting device upon which the user rests inputting fingers of each of her hands before and after inputting strokes. Rest-position keys of the conventional Qwerty inputting device format have the following values from left to right on a conventional Qwerty keyboard: "A", "S", "D", "F", "J", "K", "L and ";". The term "Qwerty key values" may refer not only to those key values associated with the inputting of letter-characters or numerals, rather, it may also denote all function keys and all computer or electronic device keys which may or may not be found on every Qwerty inputting device. The term "key value" may refer to the intended character, function, task, movement or signalling that the user is seeking to actuate with the pressing of any given inputting area. The term "KSM key" may refer to a capacitive key with one or a plurality of actuating constructs beneath, an hard-contact key with one or a plurality of actuating constructs beneath, a floating pivotable key with one or a plurality of actuating constructs beneath or a combination thereof, with a size, shape, placement and movement in order to facilitate inputting with other KSMs or a combination thereof. The term "key-surrounding" may refer to a key which not necessarily entirely surrounds another key, serves to facilitate the inputting of one or a plurality of key values, has beneath it one or a plurality of actuating constructs or a combination thereof. The term may also refer to both three-dimensional or two-dimensional keys depending upon the medium. A "key-surrounding" may refer to a single key or to a plurality of keys of the Key Surround Module Inputting Device. The terms "Key-Surround Module", "Key-Surround Module Inputting Device", "Key-Arrangement Key-Surround Module Inputttting Device" and "Floating Pivotable Key-Surround Module Inputttting Device" may refer in the Specification and in the Claims both to inputting devices in the most narrow sense interpretable in the Claims and to inputting devices in the most broad sense interpretable in the Claims where they may comprise only a part. The term "support" or "supports" may refer to both three-dimensional supports or backings and to two-dimensional surfaces, screens, monitor displays or backgrounds. The term "touch-sensitive surface" may refer to both any surface which is exposed, obvious, in direct contact with the user or a combination thereof, and to that which is concealed, internal, indirectly in contact with the user or a combination thereof, which may be used to actuate any signal or signals in the inputting process either electrically, chemically, magnetically, mechanically or a combination thereof. The term "actuating construct" may refer to any underlying electrical, chemical, magnetic, mechanical means or a combination thereof,

involved in the signaling process during inputting. The term "module" may refer to a moveable component or components and may refer to a stationary sectioning or arrangement of keys with or without structural divisions which may be thought of as a unit; for example, where keys due to their structuring, placement, proximity, appearance or with regards to their relationship or designation to a given inputting finger or hand of the user may be thought of as comprising a unit or units.

In the case of a Floating Pivotable Key-Surround Module (Hereinafter FP-KSM) inputting device, the user may rest her finger on a "central" key and extend to one of any number of adjacent key-surroundings and be able to input a plurality of key values. Said key-surroundings may be pivotable and may have a plurality of actuating constructs beneath. With regard to a Key-Arrangement Key-Surround Module (Hereinafter KA-KSM) inputting device, the user may extend from a "central" key, for example, a rest-position key, to any one of a plurality of adjacent key-surroundings, inputting a plurality of key values on the same key-surrounding. The FP-KSM or the KA-KSM may be pressed with the same force required by that of a standard key of a conventional Qwerty inputting device when inputting. The user of a KSM inputting device may rotate and displace a KSM in a plurality of directions in order to discover comfortable and ergonomic positions from which to input. An FP-KSM, FP-KSMs, a KA-KSM, KA-KSMs may, in part, individually, in plurality, in combination or a combination thereof comprise a KSM.

One disadvantage of conventional inputting devices concerns the fact that they contain keys with chiseled square key tops which are intended to distinguish them from nearby keys, and to theoretically avoid the user's inadvertent pressing of adjacent keys on the space-limited conventional inputting device. This conventional characteristic of the conventional Qwerty inputting device makes inputting difficult in that due to the limited inputting surface area and close proximity to one other, these conventional Qwerty keys are difficult for the user to accurately strike. Moreover, given this arrangement and the limited space of the standard inputting surface, laptop computer keyboard or hand-held computer, the user must pay constant and careful attention to the inputting device and her to the positioning of her fingers and hands in relation to the inputting device in order to input with accuracy. Often the user must look at the inputting device to insure her accuracy or else risk striking a key at other than its center, make inputting errors and thereby cause frequent repetition, loss of work-time and frustration.

Another disadvantage of prior art concerns the grid-like placement of keys on the conventional inputting device. For example, Patent No. 3,499,515 for a modular electric keyboard features a plurality of inputting keys along with Qwerty rest-position keys which are identically sized, shaped and placed in rows on the inputting device. The result is that the user cannot differentiate by touch amongst the keys in the rest-position key row and may thus easily and accidentally rest her fingers on the wrong keys. The user will frequently input from this incorrect placement and consequently have to re-input. In addition, the minute protrusions which are placed on some standard Qwerty inputting devices do not provide a remedy for this problem because they are hard to detect by touch due to their necessarily small size. Secondly, the user has difficulty inputting the values for the other keys of the conventional inputting device because she is not always sure if she is inputting too "high" or too "low" on the surface of the conventional Qwerty inputting device.

Another disadvantage of prior art concerns the grid-like structure of the conventional

Qwerty inputting device key placement, where much of the key surface areas are taken by the corners of conventional Qwerty square keys. The corners of these keys are a function of the entire grid-like structure of the conventional Qwerty inputting device and are an inefficient use of space, whereas other key values might be placed in such un-used spaces. Secondly, the grid-like placement of conventional Qwerty inputting device keys provides a rigid and unnatural placement of keys which is incompatible with the natural curvature of the user's finger tips when the user's hand is at rest on the inputting device.

Another disadvantage of prior art concerns the repositioning of keys. For example, Patent No. 4,597,681 provides for conventional Qwerty keys which can be re-positioned with respect to the angle made by their surfaces and the keyboard surface. The disadvantage is that it is quite tedious and time-consuming for the user to have to alter the position of each of the many keys separately rather than in groupings. Additionally, the problem becomes more burdensome when more than one user wishes to make use of the same inputting device.

Another disadvantage of prior art concerns the attempt at changing the conventional position of Qwerty key values on an inputting device. Patent # 4,579,470 provides an arrangement of keys thereby changing conventional Qwerty key value placements and finger-key relationships. The result is that the user is forced to learn new key positions after already having learned or mastered traditional Qwerty key value placements and finger-key relationships. This has in recent history been shown to be undesirable by consumers of inputting devices.

Another disadvantage of prior art inputting devices concerns the lack of visual instructiveness of such conventional inputting devices. It is not always clear to the new user just which keys are to be stricken and by which rest-position fingers. If the user has not previously been instructed as to peculiarities of finger-to-key work delegation in inputting, or if the user's memory has not been refreshed as to these relationships, it is difficult for the user to realize finger-to-key inputting relationships with conventional inputting devices.

Another disadvantage of the conventional Qwerty keyboard concerns frequently used keys such as, but not limited to, "the Space bar", "the Enter key", "the Back Space key", "the Shift key", "the Tab key", "the Caps Lock key", "the Ctrl key", "the Alt key", all "Function" keys and the mouse, trackball, touch-pad or other pointer-navigating devices. On the conventional Qwerty inputting devices these keys are placed at the extreme ends and corners of the device. Hence, these keys are difficult for the user to reach while inputting on the conventional Qwerty inputting device. In addition, due to the limited space available on the conventional Qwerty inputting device, these hard-to-reach keys are also not very larger than the other keys. Further, because of their sizes and shapes, these keys are hard to distinguish from the other Qwerty keys while inputting.

Still another disadvantage to the prior art is that whereas the conventional Qwerty computer inputting device, due to the monotonous positioning of its keys, the unnatural and hard-to-reach placements of its keys and the potentially injurious nature of its overall form, in particular with regard to the affect upon the user specifically with regard to Carpal Tunnel Syndrome and other strain injuries, has become an object for the user's fatigue and injury.

SUMMARY

Accordingly, it is a general object of the present invention to overcome the disadvantages of prior art.

More particularly, it is an object of the present invention to provide a computer inputting device whereby a key, keys, a floating pivotable key-surrounding, floating pivotable key-surroundings, a key-arrangement key-surrounding, key-arrangement key-surroundings or combination thereof each of which have one or a plurality of electrical, chemical, magnetic, mechanical actuating constructs or a combination thereof beneath, are fully or partially surrounded, concentrically or non-concentrically, circularly, or non-circularly or a combination thereof by a key, keys, a floating pivotable key-surrounding, floating pivotable key-surroundings, a key-arrangement key-surrounding, key-arrangement key surroundings or a combination thereof which have one or a plurality of actuating constructs beneath. The above may also be made displaceable or rotatable in a plurality of directions or a combination thereof in parts, units or a combination thereof.

Another object of the present invention is to provide a computer inputting device, in particular a KSM inputting device, which allows the user to input Qwerty key values and electronic device key values with greater accuracy than with that of prior art inputting devices. The new KSM inputting device structurally increases inputting surface area and accuracy for all inputting areas associated with every traditional Qwerty key value and electronic device key value.

The key-surroundings of the FP-KSM need not have confining physical boundaries nor wasteful chiseled corners between inputting keys. Rather, they extend, allowing one inputting characters' space to flow to the next increasing the inputting surface area for each key value. These inputting surface areas may cover a capacitive key actuating construct, a plurality of capacitive key actuating constructs, an hard-contact key actuating construct, a plurality of hard-contact key actuating constructs, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a touch-sensitive surface or touch-sensitive surfaces beneath, or other appropriate electrical, chemical, magnetic, mechanical signaling devices or a combination thereof. With the FP-KSM, the user need not press a limited point on the inputting device. Rather, she may press any spot on an entire area of the key-surrounding which corresponds to the designated Qwerty key value or electronic key value. It is more likely that the user is accurate where there is a plurality of key actuating constructs beneath the FP-KSM inputting device rather than with that of the conventional Qwerty inputting device having only one conventional key actuating construct beneath each Qwerty key. In addition, the user may displace and rotate the FP-KSM inputting device and its parts in order to accommodate any directional finger movement and extension which may, on the conventional Qwerty inputting device, result in inaccurate typing, thereby, increasing the user's inputting accuracy. The user is thus given more freedom to input less exactingly, however, without having to forego inputting accuracy. The FP-KSM thereby increases overall inputting accuracy and inputting efficiency.

The key-surroundings of the KA-KSM do not have confining physical boundaries nor wasteful chiseled edges between inputting surfaces. Rather, they extend, thereby increasing the surface area for each key value. These inputting surface areas may cover a capacitive key

actuating construct, a plurality of capacitive key actuating constructs, an hard-contact key actuating key construct, a plurality of hard-contact key actuating constructs, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a touch-sensitive surface or touch-sensitive surfaces beneath, or other appropriate electrical, chemical, magnetic, mechanical signaling devices or a combination thereof, and thus, offer Qwerty key values or electronic key values a plurality of such constructs. In addition, the user may displace and rotate the KA-KSM inputting device and its parts in order to accommodate any directional finger movement and extension which may otherwise result in inaccurate typing, thereby, further increasing the user's inputting accuracy. The user is thus given more freedom to input less exactingly and without compromising accuracy, thereby, increasing overall accuracy and inputting efficiency.

Yet another object of the new KSM inputting device is to allow the user to maintain the placement of her fingers on rest-position keys without having to look at the inputting device for confirmation of correct finger positioning. A KSM inputting device may be such that modules are allotted for each rest-position key. Hence, rest-position keys once known are easily recognized by touch and there is no need for the user to visually verify her finger placement. Since rest-position keys are, whether entirely or partially "surrounded", concentrically or non-concentrically, circularly or non-circularly or a combination thereof, by a key-surrounding or key-surroundings, the user at all times knows from her sense of touch that she is inputting from rest-position keys and can thus always avoid misplacing her fingers and thereby prevent inputting incorrectly. With regard to other Qwerty key values or electronic key values, the KSM allows the user to feel along each key-surrounding and thereby not extend too "high" or too "low" on the surface of the inputting device for a certain key value. Thus, the KSM further increases inputting device awareness without distracting the user for visual confirmation. Secondly, whereas there are "levels" of inputting on the KSM depending on which key-surrounding the user is inputting upon, it is clear to the user's tactility whether or not she is extending her fingers too "high" or too "low" on the surface of the KSM inputting device. The user needs only to feel for key-surroundings. Additionally, a certain entire KSM key-surrounding or key-surroundings or points or areas on the KSM key-surroundings, or a combination thereof, may be constructed at higher or lower levels than others with respect to the level of the inputting surface, at different inclines and with different texturizations or a combination thereof. These variations of keys and of key-surroundings thereby further increase the user's tactility of areas of inputting.

Another object of the new KSM inputting device is the creation of free space heretofore unavailable with prior art inputting devices.

Each FP-KSM key-surrounding contains the inputting surface of a plurality of key values. There is no physical division between Qwerty key value inputting areas on said key-surroundings. Rather, there is a flow of inputting surface area from one key character to the next. For this reason there is no wasted space between key character inputting areas. Secondly, the curvatures of the key-surroundings of the FP-KSM, along with the placement of a plurality of these surroundings about rest-position keys further saves surface space. The result is that conventional Qwerty key value inputting is achieved in less space than that which can possibly be achieved with conventional Qwerty inputting devices. Further, there is the creation of free space with the KSM inputting device, space which is inefficiently used with conventional Qwerty inputting devices.

Keys which are conventionally far from the user's reach are brought closer to the rest-position keys and added on the key-surrounds of the KSM inputting device. Thus, the FP-KSM offers both an economy of space for Qwerty key value inputting and further frees space for the addition of other key values.

With regard to a KA-KSM, each key-surrounding likewise contains the inputting surface of a plurality of key characters. The curvature of the surroundings of the KA-KSM, along with the placement of a plurality of these surroundings about rest-position keys further saves surface space. The result is more key value inputting in the same amount of space as that of the conventional Qwerty inputting device. Whereas there is far more free space on the KA-KSM inputting device as compared to that of the conventional Qwerty inputting device, keys which are conventionally far from the user's reach are brought closer to rest-position keys and added to key-surroundings of the KA-KSM inputting device. Thus, the KA-KSM offers both an economy of space for Qwerty key value inputting and further frees space for the addition of other key values.

Secondly, with regard to all KSMs, and whereas all KSM keys, key-surrounds, modules, their respective components, individually and units thereof, may be rotated, displaced in a plurality of direction, made concentric or non-concentric with respect to one another or a combination thereof, the KSM inputting device allows the user to alter her inputting area in order to accommodate the natural and unique curve of the points of the user's finger tips at rest on the inputting device. By the same means, the KSM accommodates the natural and peculiar finger movement of any user in allowing the user to alter the positions of origins and destinations of finger movement in order to find the most comfortable and least stressing directions of inputting motion.

Additionally, the KSM inputting device brings all keys, which on prior art Qwerty inputting devices are difficult to reach, difficult to recall and difficult to mentally or visually assign with regard to rest-position-key fingers, closer to KSM rest-position keys. Because of the structure of the KSM, all conventional Qwerty key values and electronic key values are brought closer together in the creation of free space described above. As a consequence, function keys and number key values of the conventional Qwerty inputting device are easier for the user to reach, visualize, recall and relate to appropriate rest-position-key fingers. KSM reduction of inefficient conventional Qwerty inputting device use of space functions to reduce the user's required finger extension and, thereby, reduces inaccurate finger extensions by the user. Thus, with the KSM, rest-position key value to other key value inputting is facilitated whereas Qwerty inputting devices contain keys which are relatively far on the inputting device from the rest-position keys. Consequentially, the KSM reduces conventional Qwerty inputting device confusion and further encourages the use of conventionally "distant" Qwerty inputting device key values.

Another object of the KSM, with its key-surroundings and rest-position keys, is to allow the user to arrange a plurality of key value inputting surfaces in units rather than having the user change the position of each key as with prior art inputting devices. With the new KSM inputting device the user may change a plurality of key placements by simply displacing one key, key-surround, module or pod containing a plurality of keys and modules.

When the KSM or parts of the KSM is or are displaced to accommodate the comfort and physicality of the user, rest-position keys may be moved in unison with their conventionally

assigned and related inputting keys, thereby, maintaining traditional rest-position key and other key relationship integrity. It is far more convenient to move the position of a module, modules, a key-surrounding or key-surroundings of a KSM inputting device than it is to re-position individually tens of conventional Qwerty keys as with prior art. Further, and with regard to a KSM inputting device with computer controlled motors, each user may automatically change the KSM inputting device to her own preference and save the positions in memory for future inputting, thereby, allowing the user to avoid repeating the process of finding ideal inputting positions.

An additional object of the new KSM inputting device is to refrain from the deletion or alteration of traditional Qwerty key value patterns and the relationships of key values to their traditionally designated inputting fingers.

With the new KSM inputting device there is no need for the user to learn new key placements and finger-to-key relationships. Key values placed on the KSM are located in the same position-relationships as those of the conventional Qwerty inputting device. The KSM leaves conventional Qwerty finger-to-key position relationships unchanged. Thus, new users of the KSM are not required to re-learn a new placement of keys as has been the case with prior art. The user can without difficulty apply her present Qwerty inputting knowledge and skill to the KSM computer inputting device. Hence, the new KSM offers easy adaptability, making it a welcomed innovation to inputting.

Additionally, the KSM offers keys and key-surroundings which have a resistance-feel when pressed which is similar to those of conventional Qwerty inputting devices. Thus, the user when inputting with a KSM feels she is inputting on a conventional inputting device with regard to key resistance-feel. With KSM the user is not forced to become accustomed to a distracting feel in inputting.

Another object of the KSM inputting device is to obviously indicate finger placement and finger-to-key relationships to the user. It is clear to the user from first glance at a KSM inputting device, for example, that certain rest-position fingers are responsible for inputting certain key values on certain key-surroundings.

The module nature of a KSM, having a rest-position key with a devoted key-surrounding or key-surroundings, visually indicates to the user as to which key values correspond to which rest-position keys. The new KSM inputting device is thus also revolutionary from the standpoint of inputting beginners. The first-time user and those who have forgotten Qwerty finger-to-key relationships will clearly decipher traditional finger-to-key relationships from the form of the KSM. Also, the new KSM user may easily memorize and recall entire key-surroundings containing a plurality of key values. Thus, learning how to input with the KSM is easy and enjoyable.

Still Another object of the KSM is to provide key values such as, but not limited to, "the Space bar", "the Enter key", "the Back Space key", "the Shift key", "the Tab key", "the Caps Lock key", "the Control key", "the Alt key", "the Escape key", all "function" keys, mouse, trackball, the touch-pad, other pointer-navigating devices or other frequently used keys with large and appropriately shaped KSM keys in order that they accommodate other KSM inputting keys. A KSM inputting device may comprise these frequently used keys in larger, easier to reach, easier to press, and conveniently shaped keys in order to best accommodate other KSM keys and or

key-surroundings while inputting. For example, the KSM may contain a curved and large "Enter key" KSM to be placed under rest-position key KSMs, thereby, enabling an easier reach from any number of the user's rest-position key fingers. In addition, other keys including but not limited to keys such as "the Shift key", "the Control key", "the Alt key", "the Caps Lock key" and "the Tab key" may be incorporated in the various key-surroundings where free space has been created by the FRM, thereby, bringing said keys into easier reach.

Yet another object of the KSM inputting device is concerned with bringing enjoyment to a heretofore burdensome and stress-related article of conventional inputting equipment. The KSM offers various freedoms such that the user is less burdened when using the KSM than when using a conventional Qwerty inputting device. With the KSM, the user is afforded space-efficiency, facilitated inputting and inputting encouragement. Secondly, the user is able to find her own uniquely comfortable position for inputting with the KSM because she may rotate, pivot and displace inputting parts and avoid causing repetitive strain injuries. Thirdly, the ability to alter her inputting area and to re-position key value placements with the KSM without altering traditional finger-to-key relationships and without making her inputting device unmanageable, allows the user to enjoy her new-found freedoms with confidence. The user is not concerned with altering her inputting device beyond the traditional key value placements with which she is familiar. Thus, the user's overall concern and tension regarding the negative effects of inputting is substantially reduced. The KSM inputting device provides freedom of inputting while it respects traditional inputting practice. Rather than being an obstacle with which to be reckoned, the KSM serves as an extension of the user's hands whereby the user need only be concerned with that which she is inputting. The KSM eliminates the disadvantages of prior art and brings enjoyment to inputting.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

Figure 1a is a top plan view of the inputting device according to the present invention.

Figure 1b is a perspective view of the inputting device according to the present invention.

Figure 1c is a partly perspective and partly exploded side view of the inputting device according to the present invention.

Figure 1d is a perspective view of the inputting device according to the present invention.

Figure 2 is an exploded-layer top plan view of the inputting device according to the present invention.

Figure 3a is a top plan view of the inputting device according to the present invention.

Figure 3b is a cross-sectional top view of the inputting device of **Figure 3a**.

Figure 3c is a cross-sectional top view of the inputting device of **Figure 3b**.

DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

Referring to **Figure 1a**, an FP-KSM embodying principles of the present invention is shown from a top plan view to have a rest-position key **1** at its focus and an optional bordering wall **2** which may separate the rest-position key from its most adjacent key-surrounding **3**, an optional dividing wall **4** and in this case outermost key-surrounding **5**. This two-dimensional illustration is also applicable to any touch-sensitive or touch-screen KSM inputting device.

Figure 1b illustrates a perspective view of an FP-KSM, having rest-position key **1** at its center without a dividing wall between the focal key and key-surroundings nor one between key-surroundings. Alternatively, trackball **7** is at its center. Key-surrounding **2** has a slightly ascending angle which peaks at its outermost circumference shown at point **3** furthermost from said track ball or rest-position key. All similar points at its entire circumference is raised in height above the inner height of inner circumference of key-surrounding **5** thereby making the edge of key-surrounding **2** easier for the user to press. Key-surrounding **5** is at a height which is at an optimum at point **4** and all similar points at its entire circumference. Alternatively, such a key-surrounding may be sculpted to be raised, indented, texturized or a combination thereof at any point or points on said key-surrounding. In this case the encasing **6** is cylindrical. Trackball **7** may additionally be underneath key **1** whereby the KSM is optionally a mouse. Wire **8** transports electrical signals for the FP-KSM.

Figure 1c is an enlarged perspective cross-sectional illustration of a key and key-surrounding exploded at areas indicated at points **4** and **5**. At point **4** and in this case central and concentric key **1** is illustrated with its area of actuating construct **2** which may either be a conventional capacitive or hard-contact key actuating construct in the case of key **1** being a capacitive or hard-contact key, or a pointer-navigating device actuating construct where in an alternative **1** represents a pointer-navigating device, or a combination thereof. Said actuating construct **2** fits inside cylindrical spring **3** which can alternatively be of metal or of an elastic accordion-like embodiment providing for the pivotability of key-surrounding **12** and **13**. Alternatively, there may be a plurality of several spring-like apparatuses placed in a circular configuration at points similar to those of point **8** at the circumference of said spring **3**, or in the alternative, the entire area above platform **10** may be comprised of an elastic or springing mass which would provide the requisite pivotability for key-surrounding **12** and **13**. Platform **10** contains a plurality of actuating construct points like those similar to those indicated by **9**. Above such points exemplified by **9** are corresponding actuating protrusion such as **11** floating above each of said points together forming a plurality of miniatures in this case of the conventional capacitive or hard-contact key actuating mechanism **2**. Alternatively, points similar to **11** may represent the actuating contact points and the activating protrusions may be placed on platform **10** represented by points indicated by **9**.

Figure 1d is a perspective illustration of an exterior of a KSM with the central or rest-position key **1** and an accordion-like elastic or spring-like tubular structure **4** which extends about the edge of the KSM forming a connecting wall at the circumference of the top pivotable part of the KSM **3** at point **2** and similar such points, thereby, allowing one side of the KSM to extend upward as the opposite side is pressed down. Structure **4** serves to contain the floating unit, which is also connected to the surrounding base wall **6** at circumference points similar to point **5**.

Alternatively, the area illustrated by point **4** may also represent the outer part of an elastic or springing mass as an alternative or supplemental means for said accordion-like or cylindrical spring or said plurality of spring-like circularly configured apparatuses similar to spring **3** in **Figure 1c**, where such mass would rest between platform **10** and key surrounding **13** of **Figure 1c,** where said key-surrounding or said platform or a combination thereof holds an actuating surface, a plural-directional capacitive key actuating construct, plural-directional hard-contact key actuating construct, a plurality of capacitative key actuating constructs, a plurality of hard-contact key actuating constructs, a touch-sensitive surface, touch-sensitive surfaces or a combination thereof.

Figure 2 is an exploded-layer top plan of a KA-KSM inputting device. At layer **A**, key **4**, in this case the focal key, is fully surrounded by keys similar to key **2** and further surrounded by keys similar to key **5**. The KA-KSM is one in this case which corresponds to an inputting device for the user's right fore-finger with the key value "J" as the rest-position key surrounded in this case with the values "U", "Y", "H", "N" and "M" counter-clockwise from the top at the first key-surrounding and "&/7", "^/6", "Prt Scr", "Back Space" and "Ins" counter-clockwise at the furthest key-surrounding from said rest-position key. The blank KSM keys illustrate a KSM creation of space. While key values may be placed at the four blank value keys to the right of rest-position key "J", these KA-KSM positions may be cut-out (See **Figure 3a**). Borders **1**,**6** and **3**, and all other similar ones may be structural or illustrate the edges of keys. At layer **B**, the layer beneath layer **A**, positions of in this case conventional hard-contact or capacitative key actuating constructs are illustrated at points **7**,**9**, **10** and similar such points. There is a plurality of actuating constructs at platform **8** which may or may not actuate the same key value. Layer **C** illustrates the level beneath the tops of said actuating constructs of layer **B**. Electronically sensitive zones **11** and **13** and similar such zones lie beneath each of actuating constructs above. Alternatively, entire shaded areas **12**, **14** and other similar areas may contain touch-sensitive surfaces for certain other forms of actuating devices. Layer **D** illustrates a support and in this case a rotational and displacing mechanism which consists of a circular wall **15** which is grooved at its interior in order to accommodate grooves at the outer edge circumference of the disk **16** at point **18** and similar such points at said circumferences. Said disk is attached at its top at point **17** to layer **C** and thus to the rest of the module whereas each layer is connected to its adjacently illustrated layer. Disk **16** is also attached at its other end to the base or a pod, or is extended to grooves in the base or a pod of the KSM inputting device. Said circular wall extends upward in order to contain said layers.

Figure 3a is a top plan view of a KSM inputting device. KSM **1** has an outermost key-surrounding which is partly cut-out in order to accommodate an amount of directional inputting from rest-position key **2** given the amount of available space on the illustrated KSM inputting device. The key value "J" is the designated value for the rest-position key **2** with the values "U", "Y", "H", "N" and "M" counter-clockwise from the top at the first key-surrounding and "&/7", "^/6","Back Space" and "Ins" at the furthest key-surrounding from rest-position key **2**, all in this case in keeping with conventional Qwerty finger-to-key designations save for the "Back Space" and "Ins" keys. Rest-position keys **5** and **8** are of an oval-like shape and have similarly shaped key-surroundings **3**, **4**, **6** and **7** which are also in this case appropriate for conventional Qwerty key value inputting from the rest-position keys **5** and **8**. Additionally, more such key-

surroundings may be added to accommodate for other key values. The key values in keeping with standard inputting practice for these two rest-position keys are respectively "K" and "L" with adjacent key-surrounding key values of "I", "<," and "O", ">/." respectively. At the furthest key-surrounding in this case from the rest-position keys **5** and **8** are the key values "*/8", "Alt" and "(/9", "Del" respectively, all letter-character and number key values being in keeping with conventional Qwerty key value and finger-to-key relationships. Key-surroundings **3** and **6** are of a kind of KSM key-surrounding which are thin at their left and right sides. Rest-position key **9** has a partially cut-out key-surrounding **10** and neither is in this case neither concentric with the outermost crescent cut-out key-surrounding **11** of this KSM. Key-surrounding **11** is mostly devoted in this case to the key value for the "Shift" key being conventionally to the lower right of rest-position key **9** of the key value ":/;" with ")/0" and "+/=" to the upper right of rest-position key **9** all in keeping with conventional Qwerty positioning. On key-surrounding **10** are the values "Ctrl", "P", "}/[", "}/], ""/'" and "?//" clockwise from the top. All these values, save for the "Ctrl" key value are in their conventional Qwerty finger-to-key relationships. The placement of the "Ctrl" key value is a use of KSM free space and could be substituted for any other key without disturbing conventional Qwerty key value positionings. Below the above-mentioned KSMs, which in this case correspond to the user's right inputting hand, is the enlarged and oval KSM key **12**, which functions together with its above four KSMs, fitting in the gap on the surface of the KSM inputting device, making efficient use of new KSM space and providing a very frequently used key value with a key which can easily reached and stricken by more than one of the rest-position key fingers in this case of the user's right hand during inputting. The KSM key **12** is designated with the "Enter" key value. These right hand rest-position key KSMs are affixed to be mobile upon the right pod **13** which is in turn affixed to be mobile upon the base **14** (See description of **Figure 3b** and **Figure 3c** below). Key-module **15** is in this case designated with the "Space" key value and is thereby located and shaped to be reached easily by the thumbs of the user. In this case dividing line **23** indicates where the base of the KSM inputting device folds for transporting, having fixtures **20** and **21** which snap together keeping both halves interlocked. Additionally, in the case of the transportable KSM inputting device, KSM key **15** is comprised of two parts, **15a** and **15b,** in order to be displaced to accommodate the folding of the KSM inputting device.

Rest-position keys **26** and **29** are of an oval shape and are designated with Qwerty rest-position key values "S" and "D" respectively. These have similarly shaped key-surroundings **24, 25, 27** and **28** which are also in this case appropriate for conventional Qwerty key value inputting from rest-position keys **26** and **29**. These keys are of values "@/2" and "Tab", "W" and "X", "#3" and "Num lock", and "E' and "C" respectively. The blank value on these key-surroundings illustrates a KSM creation of free space and can be designated with any key value which will not conflict with conventional Qwerty key value positionings. Additionally, more such key-surroundings may be added to accommodate the addition of even more key values. Key-surroundings **24** and **27** are of a kind of KSM key-surrounding which are thin at their left and right sides. Rest-position key **30** is of the key value "F" with its most adjacent key-surround having key values "R", "T", "G", "B" and "V" clockwise from the top. These letter-character key values are in their proper conventional Qwerty key value relation with rest-position key value "F" save for the key value "B". This key value has been placed on this key-surrounding instead of on

that most adjacent to rest-position key **2** in order to give an even distribution of key values to each of the two fore-finger rest-position keys. However, the "B" key value may be designated to either of these rest-position keys. Key-surrounding **31** is partially cut-out and has key-values "$/4" and "%/5" in the conventional Qwerty key value positioning. The empty space on this key-surround may be substituted with a plurality of values and illustrates the availability of KSM free space. Rest-position key **22** has a partially cut-out key-surrounding **18** and in this case neither is concentric with the outermost amorphous key-surrounding **19** of this KSM. The entire left-most part of key-surrounding **19** is devoted in this case to the Qwerty key value for the "Shift" key which is conventionally to the left of rest-position key **22** of key value "A". Also designated to this key-surrounding are values "Esc" and "!/1" at its top and "Fn" and "Ctrl" at its bottom. The value for "!/1" is in the conventional Qwerty position with respect to rest-position key **22**. The "Esc" key value is placed at the left upper part of inputting devices conventionally. The key-surrounding most adjacent to the rest-position key **22** contains Qwerty values "Q" at its top and "Z" at its bottom in keeping with conventional relationship to the rest-position key value "A". The value for "Cap Lock" on this key-surrounding is a use of the KSM free space and may be substituted for another from a plurality of key values. Below the above-mentioned KSMs, which in this case correspond to the user's left inputting hand, is the cursor-navigating device KSM **17**, which functions together with its above four KSMs, fitting in the gap on the surface of the KSM inputting device, and making efficient use of available KSM space in providing a KSM key which can be manipulated by any one of the user's rest-position key fingers. The key-surroundings of KSM **17** may be utilized for the values of "PgUP', PgDn", "Home" and "End", and the four "Arrow keys" separately whereas these are values associated with direction similar to the concern of the cursor-navigating device and thereby will be easier for the user to recall while inputting. KSMs are affixed to be mobile upon the left pod **16** which is in turn affixed to be mobile upon the base **14** (See description of **Figure 3c** below). KSM **17** is in this case designated as the cursor-navigating KSM.

Although in **Figure 3a** all KSMs are illustrated as being FP-KSMs with keys, KSM keys and floating pivotable key-surroundings, alternatively any or all of these or parts thereof may be substituted with other FP-KSMs, keys, KSM keys, floating pivotable key-surroundings, KA-KSMs, keys, KSM keys or parts thereof or a combination thereof. Additionally, areas of KSM free space may be utilized for the disbursement of existing key values upon their assigned keys, hence, designating more inputting area to these existing key values.

Figure 3b is a cross-sectional top view with pods **40** and **22** each on either side of the division line **23** of the base **24** of a KSM inputting device. Within path frame **1** of right pod **22** there are four pathways which move within said path frame horizontally at point pairs **2** and **21**, **5** and **20**, **8** and **15**, and, **11** and **14**. Inside these pathways are cylindrical stems which are at their tops connected to KSMs **3**,**6**,**9** and **12**, which rotate and which move vertically within said pathways. These four correspond to the four rest-position key KSMs of pod **13** of **Figure 3a**. Separate path frame **17** contains a single pathway which moves horizontally at points **16** and **19** within said path frame. In this pathway cylindrical stem **18** rotates and moves vertically and in this case would at its top be connected to the KSM key which corresponds to that of the "Enter" key **12** in **Figure 3a**. Likewise, within path frame **34** of the left pod **40** there are four pathways which move within said path frame horizontally at point pairs **35** and **32**, **38** and **41**, **42** and **27**,

and, **45** and **26**. Inside these pathways are cylindrical stems which are at their tops connected to KSMs **33**, **37**, **43** and **25**, which rotate and which move vertically within said pathways. These four correspond to the four rest-position key KSMs of pod **16** of **Figure 3a**. Separate path frame **31** contains a single pathway which moves horizontally at points **28** and **30.** In said pathway cylindrical stem **29** rotates and moves vertically and in this case would at its top be connected to a KSM which corresponds to that of the cursor-navigating KSM **17** in **Figure 3a**.

Figure 3c is a cross-sectional top view of the base **16** of the KSM inputting device beneath pods **4** and **11** which correspond to pods **22** and **40** of **Figure 3b** respectively. Beneath pod **4** is a path frame **1** inside which rotates and travels vertically a cylindrical stem **2** which is at its upper portion attached to pod **4** at point **3**. Beneath pod **11** is pathframe **12** inside which rotates and travels vertically a cylindrical stem **13** which is at its upper portion attached to pod **11** at point **14**. Path frame **5** contains a pathway **9** which moves horizontally within said path frame. Within said pathway **9** is a cylindrical stem **6** which rotates and travels vertically inside said pathway. Stem **6** is attached in this case to the "Space" key **15** described in **Figure 3a**. In the alternative, and with regard to the KSM inputting device which has fold **15** and necessarily a "Space bar" which is separable into two parts to accommodate such folding, twin cylindrical stems **8**, rotate and travel in the direction set by path frame **10** and pathway **7**.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of constructions differing from the types described above. And while the invention has been described and illustrated as embodied in inputting devices, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the essence of the present invention that others can, by applying current knowledge, readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitutes essential characteristics of the generic or specific aspects of this invention.

What is claimed as new and desired to be protected by Letters Patent is set forth in the appended Claims.

I claim:

1. A key-surround module inputting device comprised of

a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-direction pivotable key-surrounding as below, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-surrounding as below, key-arrangement inputting key-surroundings or a combination thereof,

and

a floating plural-direction pivotable inputting key-surrounding, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-surrounding, key-arrangement inputting key-surroundings, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, or a combination thereof, not limited to resting concentric with regard to the above or to each other, not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating construct, an hard-contact key actuating construct, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a plurality of capacitative key actuating constructs, a plurality of hard-contact key actuating constructs, a touch-sensitive surface, touch sensitive surfaces or a combination thereof beneath.

2. A key-surround module inputting device comprised of

a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-direction pivotable key-surrounding as below, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-surrounding as below, key-arrangement inputting key-surroundings or a combination thereof,

and

a floating plural-direction pivotable inputting key-surrounding, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-surrounding, key-arrangement inputting key-surroundings, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, or a combination thereof, not limited to resting concentric with regard to the above or to each other, not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating construct, an hard-contact key actuating construct, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a plurality of capacitative key actuating constructs, a plurality of hard-contact key actuating constructs, a touch-sensitive surface, touch-sensitive surfaces or a combination thereof beneath,

and

a support or supports which contains or contain the above, individually, in any unit, in units or a combination thereof, enabling any of the above to rotate individually, in any unit, in units or a combination thereof, enabling any of the above to be displaced in a plurality of directions, individually, in any unit, in units or a combination thereof, enabling any of the above to be made concentric or non-concentric with respect to any of the above individually, in any unit, in

units or a combination thereof, or a combination thereof.

3. A key-surround module inputting device comprised of

a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-directional pivotable key-surrounding as below, floating plural-directional pivotable key-surroundings, a key-arrangement key-surrounding as below, key-arrangement key-surroundings or a combination thereof,

and

a floating plural-direction pivotable inputting key-surrounding, floating plural-direction pivotable key-surroundings, a key-arrangement key-surrounding, key-arrangement key-surroundings or a combination thereof, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, or a combination thereof, not limited to being concentric with regard to the above, not limited to surrounding the above and not limited to being circular in shape, having a capacitive key actuating construct, an hard contact actuating key actuating construct, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a plurality of capacitative key actuating constructs, a plurality of hard-contact key actuating constructs, a touch-sensitive surface, touch-sensitive surfaces or a combination thereof beneath,

and

whereas said capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface, touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-direction pivotable key-surrounding, as above, floating plural-direction pivotable key-surroundings, a key-arrangement key-surrounding, key-arrangement key-surroundings or any combination thereof is or are manually or automatically adjustable with regard to concentricity amongst or between each other, or, is or are further comprised of a support or supports and extension or extensions beneath and a primary plate or primary plates beneath said extension or extensions containing a channel or channels by which said extension or extensions enable modular travel in a plurality of direction thereby allowing said inputting device to be reconfigured in a plurality of direction, allowing rotation and displacement for the unique comfort of any user, or, is or are further comprised of a secondary extension or secondary extensions beneath and a secondary plate or secondary plates beneath said secondary extension or secondary extensions containing a channel or channels by which said secondary extension or secondary extensions enable modular travel in a plurality of direction thereby allowing said primary plates or primary plates to be moved in any direction and to be rotated separately or in unison, or a combination thereof.

4. A key-surround module inputting device comprised of

a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-direction pivotable key-surrounding as below, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-

surrounding as below, key-arrangement inputting key-surroundings or a combination thereof,

and

a floating plural-direction pivotable inputting key-surrounding, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-surrounding, key-arrangement inputting key-surroundings, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, or a combination thereof, not limited to resting concentric with regard to the above or to each other, not limited to surrounding the above, and not limited to being circular in shape, with a capacitive key actuating construct, an hard-contact key actuating construct, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a plurality of capacitative key actuating constructs, a plurality of hard-contact key actuating constructs, a touch-sensitive surface, touch-sensitive surfaces or a combination thereof beneath,

and

a support or supports which contains or contain the above, individually, in any unit, in units or a combination thereof, enabling any of the above to rotate individually, in any unit, in units or a combination thereof, enabling any of the above to be displaced in a plurality of directions, individually, in any unit, in units or a combination thereof, enabling any of the above to be made concentric or non-concentric with respect to any of the above individually, in any unit, in units or a combination thereof, or any combination thereof.

5. An inputting device according to claim 4, further comprised of a motor or motors which provide said displacement and rotation automatically.

6. An inputting device according to claim 5, wherein said motor or motors is or are controlled by a computer which directs movement and rotation, and stores positions of the computer inputting device, thereby, allowing users to reconfigure and to recall positions the computer inputting device.

7. An inputting device according to claim 6, wherein the surface beneath said support, supports or a combination thereof, are part of a hinged folding or overlapping surface or surfaces which snap together, thereby, allowing the computer inputting device to be made more compact and portable.

8. A key-surround module inputting device comprised of

a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-directional pivotable key-surrounding as below, floating plural-directional pivotable key-surroundings, a key-arrangement key-surrounding as below, key-arrangement key-surroundings or a combinations thereof,

and

a floating plural-direction pivotable inputting key-surrounding, floating plural-direction pivotable key-surroundings, a key-arrangement key-surrounding, key-arrangement key-surroundings or a combination thereof, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, or a combination thereof, not limited to being concentric with regard to the above, not limited to surrounding the above and not limited to being circular in shape, having a capacitive

key actuating construct, an hard contact actuating key actuating construct, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a plurality of capacitative key actuating constructs, a plurality of hard-contact key actuating constructs, a touch-sensitive surface, touch-sensitive surfaces or a combination thereof beneath,

and

whereas said capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface, touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-direction pivotable key-surrounding, as above, floating plural-direction pivotable key-surroundings, a key-arrangement key-surrounding, key-arrangement key-surroundings or any combination thereof is or are manually or automatically adjustable with regard to concentricity amongst or between each other, or, is or are further comprised of a support or supports and extension or extensions beneath and a primary plate or primary plates beneath said extension or extensions containing a channel or channels by which said extension or extensions enable modular travel in a plurality of direction thereby allowing said inputting device to be reconfigured in a plurality of direction, allowing rotation and displacement for the unique comfort of any user, or, is or are further comprised of a secondary extension or secondary extensions beneath and a secondary plate or secondary plates beneath said secondary extension or secondary extensions containing a channel or channels by which said secondary extension or secondary extensions enable modular travel in a plurality of direction thereby allowing said primary plates or primary plates to be moved in any direction and to be rotated separately or in unison, or a combination thereof.

9. An inputting device according to claim 8, further comprised of a motor or motors which provide said movement and rotation automatically.

10. An inputting device according to claim 9, wherein said motor or motors are controlled by a computer which directs movement and rotation, and stores positions of the computer inputting device, thereby, allowing users to reconfigure and to recall positions the inputting device.

11. An inputting device according to claim 10, wherein the surface beneath said secondary plate or plates are part of a hinged folding or overlapping surface or surfaces which snap together, thereby, allowing the inputting device to be made more compact and portable.

12. A key-surround module inputting device comprised of a plurality of floating plural-direction pivotable inputting key-surrounding or key-arrangement key-surrounding module or modules, each having a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer-navigating devices, a trackball, trackballs, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a floating plural-direction pivotable inputting key-surrounding as below, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-surrounding as below, key-arrangement inputting key-surroundings or a combination thereof,

and

a floating plural-direction pivotable inputting key-surrounding, floating plural-direction pivotable inputting key-surroundings, a key-arrangement inputting key-surrounding, key-

arrangement inputting key-surroundings or combination thereof, not limited to being concentric with regard to the above, not limited to surrounding the above and not limited to being circular in shape, with a capacitive key actuating construct, an hard-contact key actuating construct, a plural-directional capacitive key actuating construct, a plural-directional hard-contact key actuating construct, a plurality of capacitative key actuating constructs, a plurality of hard-contact key actuating constructs, a touch-sensitive surface, touch-sensitive surfaces or a combination thereof beneath.

13. An inputting device according to claim 12, further comprised of a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer navigating devices, a trackball, trackballs, a touch-sensitive surface or touch-sensitive surfaces including but not limited to a touch-screen, a screen or monitor display, screen or monitor displays, a key-surrounding, key-surroundings or any combination thereof which is or are manually or automatically adjustable with regard to concentricity amongst or between each other.

14. An inputting device according to claim 13, further comprised of a support or supports and extension or extensions beneath said key-surrounding, key-surroundings, key-surrounding module, key-surrounding modules or a combination thereof and a primary plate or primary plates beneath said extension or extensions containing a channel or channels by which said extension or extensions enable modular travel in a plurality of direction, thereby, allowing said key-surrounding module or modules, in whole or in part, to be moved in a plurality of direction and to be rotated, allowing said inputting device to be adjustable for the unique comfort of any user.

15. An inputting device according to claim 14, further comprised of a capacitive key, capacitive keys, an hard-contact key, hard-contact keys, a pointer-navigating device, pointer navigating devices, a trackball, trackballs, a touch-sensitive surface, touch-sensitive surfaces not limited to a touch-sensitive screen, a screen or monitor display, screen or monitor displays, or a combination thereof, module or modules, with a support and extension or extensions beneath said module or modules and a primary plate or primary plates beneath said extension or extensions containing a channel or channels by which said extension or extensions enable modular travel in a plurality of direction, thereby, allowing said modules to be moved in a plurality of direction and to be rotated, allowing said device to be adjustable for the unique comfort of any user and complimenting the positioning of other said key-surrounding module or modules or components thereof.

16. An inputting device according to claim 15, wherein said primary plate or primary plates holds or hold a plurality of said modules, having a secondary extension or secondary extensions beneath and a secondary plate or secondary plates beneath said extension or extensions containing a channel or channels by which said secondary extension or secondary extensions enable modular travel in a plurality of direction, thereby, allowing a plurality of modules to be moved in a plurality of direction and to be rotated in unison.

17. An inputting device according to claim 16, wherein the surface beneath said secondary plate or secondary plates are part of hinged, folding, overlapping, interlocking surface or surfaces or a combination thereof, thereby, allowing the inputting device to be made more compact and portable.

18. An inputting device according to claim 17, wherein said key-surround, key-

surrounds, module, modules, respective parts, components or a combination thereof are moved by means of a motor or motors, thereby, allowing automatic movement and rotation of the inputting device.

19. An inputting device according to claim 18, wherein said motor or motors are controlled by a computer which directs motor movement and stores positions of said module, modules, plate, plates, respective components or a combination thereof in its memory, thereby, allowing users to change positions of said module, modules, plate, plates, or respective components or a combination thereof, thereby, allowing the user to quickly and effortlessly change and recall positions of the inputting device.

ABSTRACT

A computer inputting device consists of a key, keys, a plural-directional plural-value pivotable key-inputting surrounding or surroundings, key-arrangement inputting surrounding or surroundings or a combination thereof, which due to their structure or placement form an inputting key-surround module or inputting key-surround modules. Each key or key-surrounding, though it may not necessarily surround, be circular in shape nor be concentric with respect to its "central" key, keys or key-surrounds, has a plurality of inputting key actuating constructs beneath. Such key-surround module or modules, respective components or a combination thereof may be stationary, displaced, rotated or a combination thereof, separately or in units, with an underlying support or a system of supports. The user is able to input conventional inputting values with more inputting space efficiency, greater accuracy, less requirement for exacting inputting movements than with that of a conventional inputting device, complete tactile familiarity, the availability of more key values than with conventional inputting devices, the availability of larger and conveniently shaped keys for ease of inputting with other keys, an increased awareness of the location of key values, a similar key resistance-feel as with that of conventional inputting devices, and with the ability to displace key value components while maintaining conventional Qwerty inputting device finger-to-key relationships.

Figure 1a

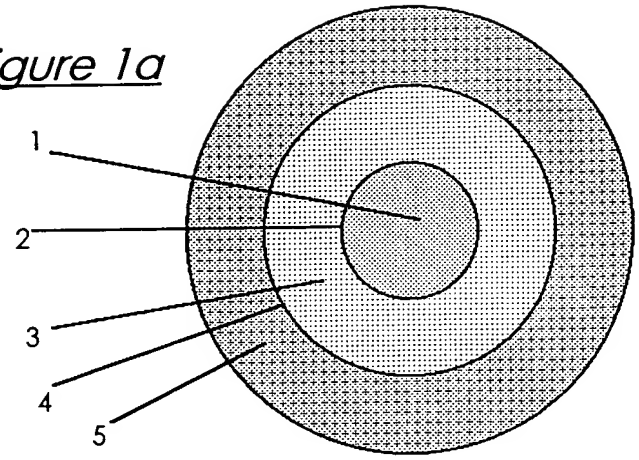

Figure 1b

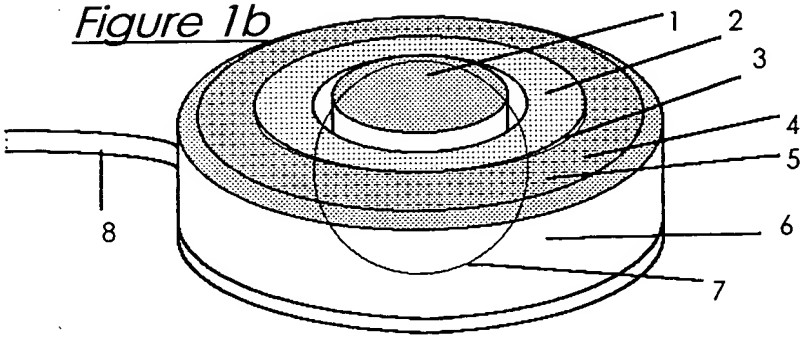

Figure 1c

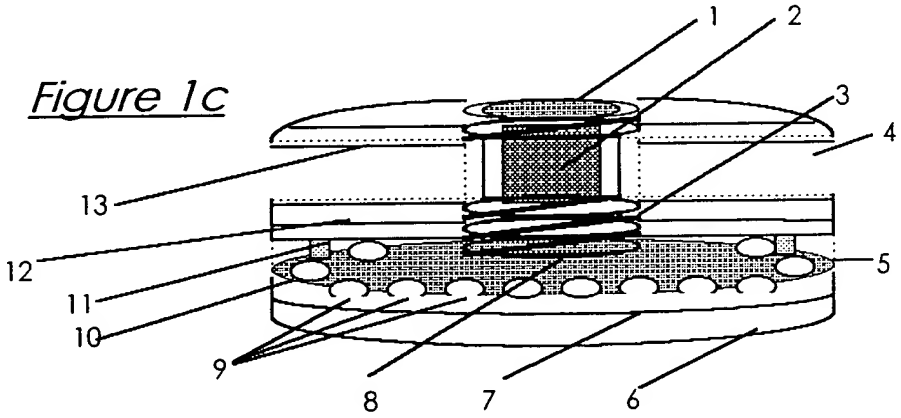

Figure 1d

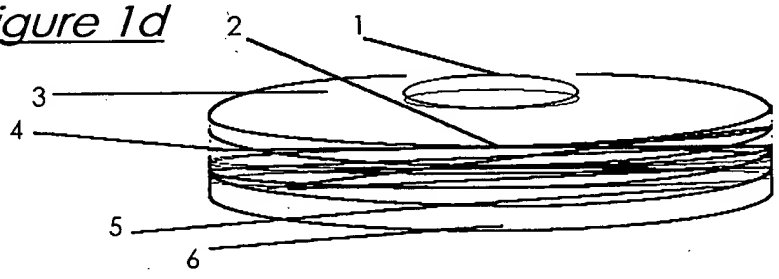

Figure 2

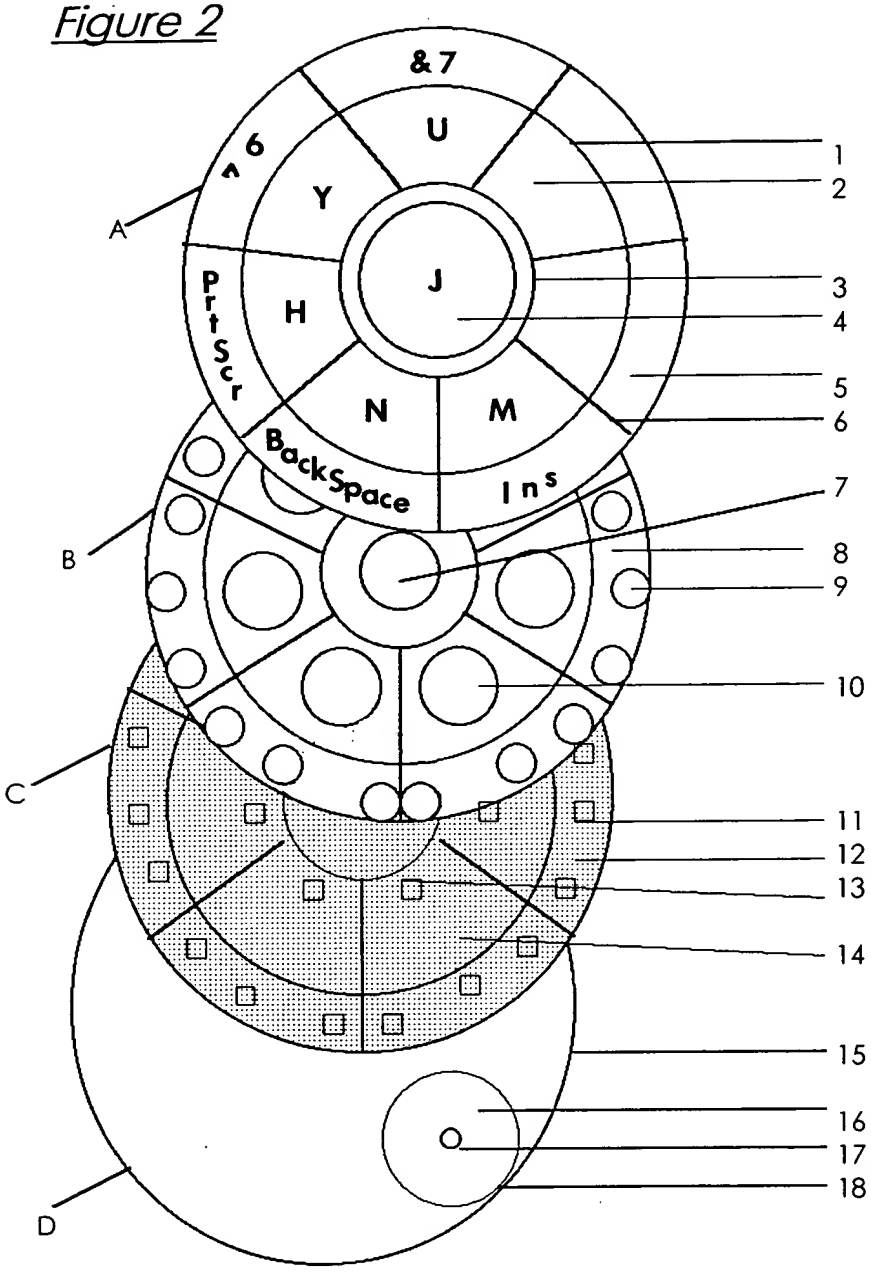
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Figure 3a

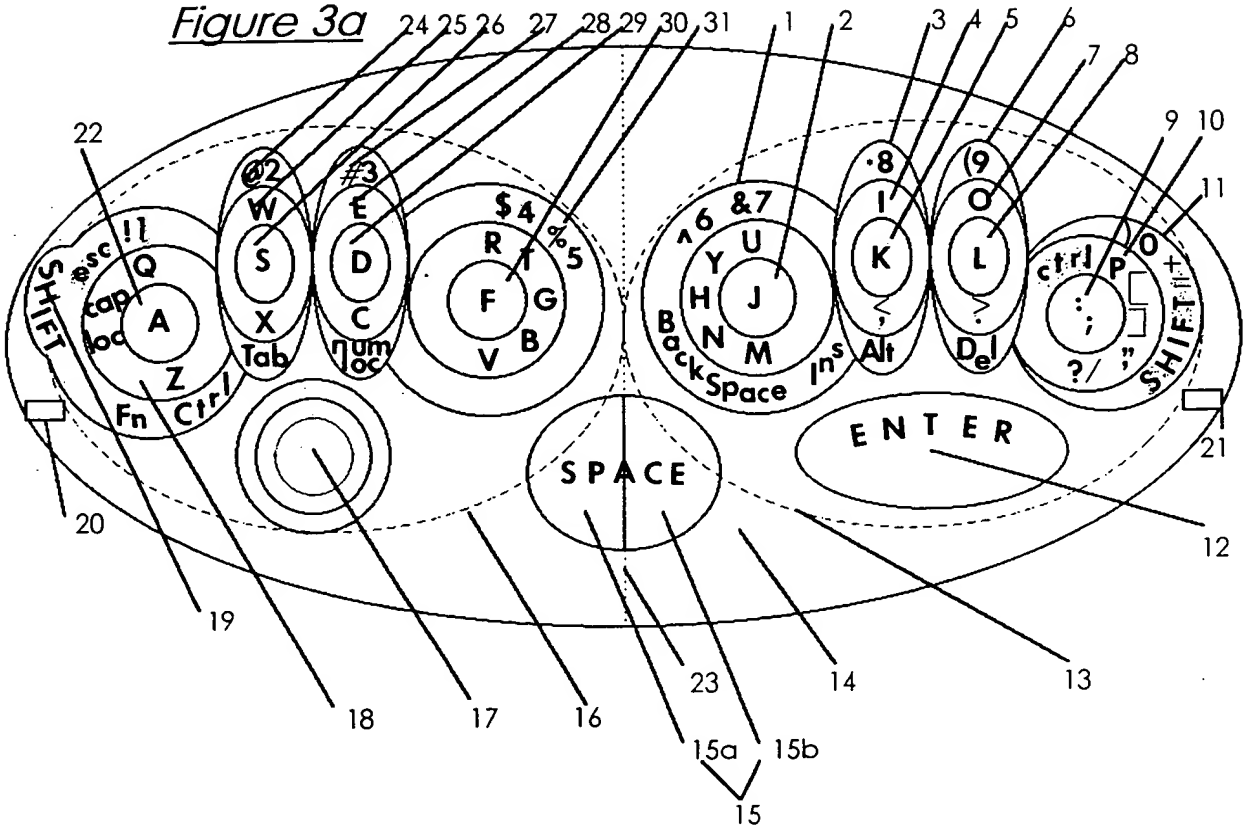
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Figure 3b

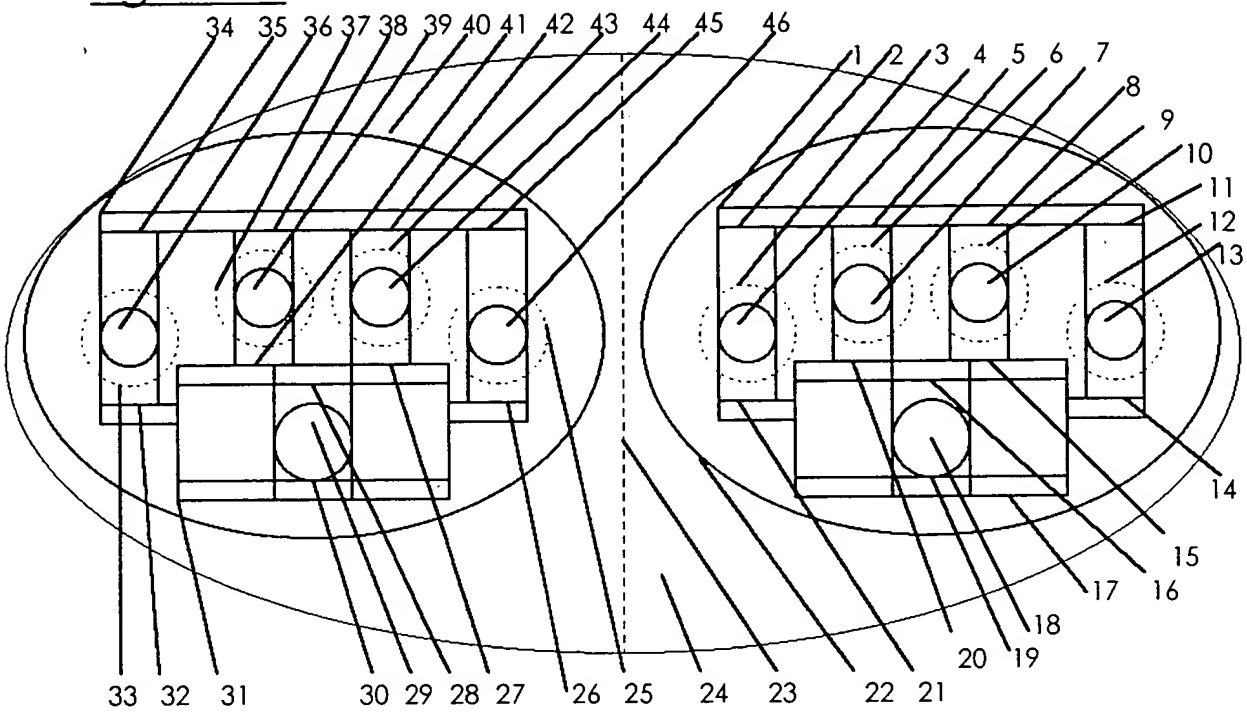

Figure 3c

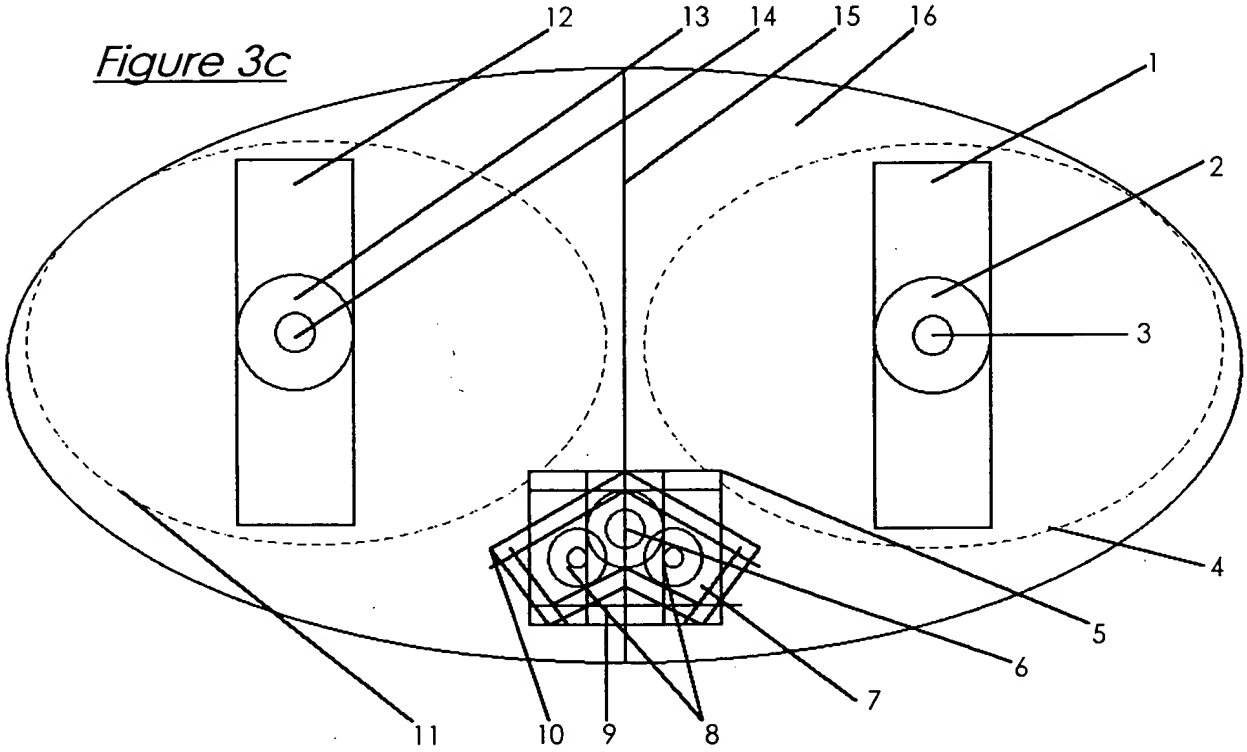

EXHIBIT B

UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/835,884	04/16/2001	2673	475		4	19	6

CONFIRMATION NO. 4549

FILING RECEIPT

OC000000006159886

Arthur H. Sarkissian
3 Hanover Square
Apt. # 14G
New York, NY 10004

Date Mailed: 06/07/2001

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Applicant(s)

Arthur H. Sarkissian, New York, NY;

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted 06/07/2001

Projected Publication Date: 10/17/2002

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

Key-surround module inputting device

Preliminary Class

345

Data entry by : TEGBARU, HAIMANOT **Team :** OIPE **Date:** 06/07/2001

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Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

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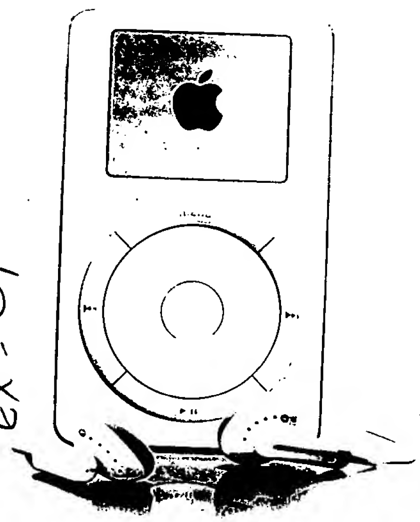
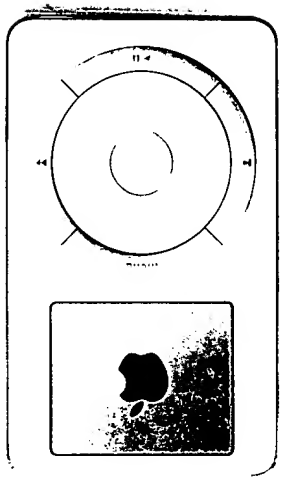
D. Makosiej

Say hello to iPod.



EX - C1

EX-4



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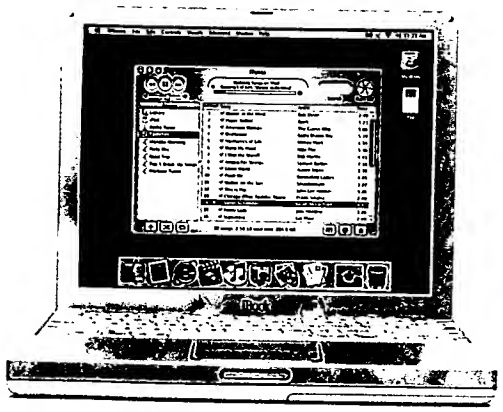
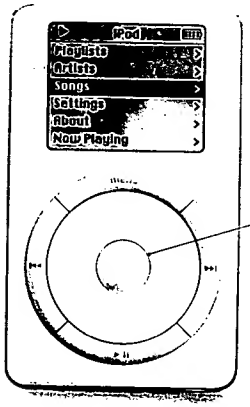


super-fast FireWire auto-updating

When you first plug iPod into your Mac, all of your iTunes songs and playlists are automatically downloaded into iPod at blazing FireWire speed. Then, when you add new music or rearrange playlists in iTunes, simply plug iPod back in and it's automatically updated in seconds. It simply doesn't get any easier or faster than this.



Access to 1,000 songs is under your thumb. Find your music by playlist, artist or song in seconds with iPod's unique and incredibly easy-to-use scroll wheel.

1,000 songs in your Mac.

Apple's award-winning iTunes software makes it easy to put your entire music collection right on your Mac. You can rip MP3s, create playlists and burn custom CDs[1] all from one refreshingly simple interface. And now iTunes 2 offers even more features—like MP3 CD burning, crossfading and an equalizer. iTunes makes it simple and fun to build your very own digital music library on your Mac. Now, imagine having all of that incredible music with you wherever you go—even when you're away from your Mac.

1,000 songs in your pocket.

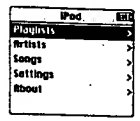
Presenting iPod. The first MP3 player to pack a mind-blowing 1,000 songs[2] and a 10-hour battery[3] into a stunning 6.5-ounce package you can literally take everywhere. But iPod isn't just a revolution in portability, it's also a revolution in simplicity. Just plug it into your Mac[4] and all of your iTunes songs and playlists are automatically downloaded into iPod at blazing FireWire speed. With iPod, it's that easy to take your entire music collection with you wherever you go, in the pocket of your choice.

With iPod's blazingly fast FireWire you can download an entire CD in less than 10 seconds. Or 1,000 songs in under 10 minutes. Plus, iPod automatically charges whenever you're connected.

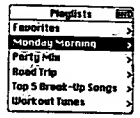
iPod's rechargeable lithium polymer battery gives you 10 hours of continuous playback, so your music keeps going and going and going.

iPod's ultra-slim 5-gigabyte[2] hard drive doubles as a FireWire drive, so you can store your documents, files and applications alongside your music.

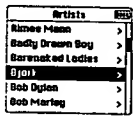
iPod features up to 20 minutes of skip protection, so you won't miss a beat, and "earbud" headphones that deliver remarkable sound quality, so you won't miss a note.



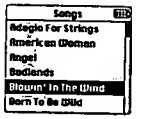
iPod's main menu lets you access your music the way you want to—by playlist, artist or song.



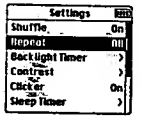
Your iTunes playlists are automatically downloaded into iPod so select your favorite, mix with just a click.



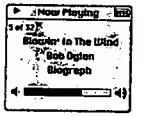
Or choose the artists you're in the mood for, then select their best album or song.



Or zip through an alphabetical list of titles to find the song you're looking for in no time.



Then set iPod to play your favorite songs again and again, or shuffle through your entire library.

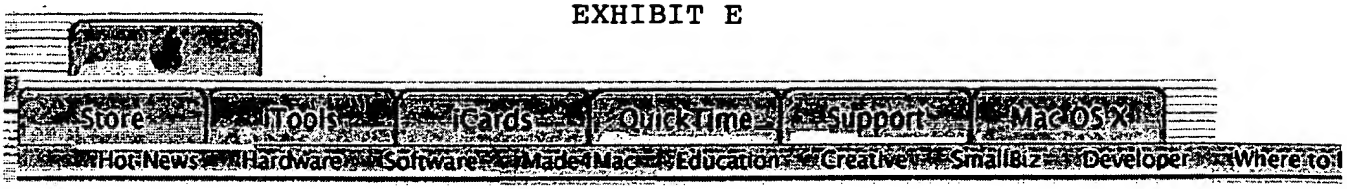


Finally, adjust the volume and fully enjoy iPod's breathtakingly pure and dynamic digital sound.

Think different.

Don't steal music.

EXHIBIT E



Apple Presents iPod

Ultra-Portable MP3 Music Player Puts 1,000 Songs in Your Pocket

CUPERTINO, California—October 23, 2001—Apple® today introduced iPod™, a breakthrough MP3 music player that packs up to 1,000 CD-quality songs into an ultra-portable, 6.5 ounce design that fits in your pocket. iPod combines a major advance in portable music device design with Apple's legendary ease of use and Auto-Sync, which automatically downloads all your iTunes™ songs and playlists into your iPod, and keeps them up to date whenever you plug your iPod into your Mac®.

"With iPod, Apple has invented a whole new category of digital music player that lets you put your entire music collection in your pocket and listen to it wherever you go," said Steve Jobs, Apple's CEO. "With iPod, listening to music will never be the same again."

Next Generation Player
iPod represents the next generation of portable music players that store music on an internal hard drive, yet are only 20 percent of the volume of today's hard drive-based players. iPod stores up to 1,000 CD-quality songs on its super-thin 5 GB hard drive, and features up to 20 minutes of shock protection for nonstop playback when running, biking or other activities.

iPod's built-in FireWire® port lets you download an entire CD into iPod in under 10 seconds and 1,000 songs in less than 10 minutes—30 times faster than USB-based players.

iPod plays up to 10 hours of continuous music, powered by its rechargeable lithium polymer battery, and recharges automatically whenever iPod is connected to a Mac, using power supplied over the FireWire cable. Every iPod comes with a compact, FireWire-based power adapter for traveling. iPod's high-capacity 5GB hard drive doubles as a portable FireWire hard drive for storing presentations, large documents, graphic images and digital movies.

iPod plays music in the popular MP3, MP3 VBR (variable bit rate), AIFF and WAV formats and can support MP3 bit rates up to 320-Kbps. Its upgradable firmware enables support of future audio formats. For CD-quality sound, iPod is equipped with a high-output 60-mW amplifier that delivers 20 to 20,000 Hz frequency response for deep bass and crystal-clear highs. iPod's earbud-style headphones are built with neodymium magnets for enhanced frequency response and high-fidelity sound.

iPod also features a 160-by-128-pixel high-resolution display, with a white LED backlight to give clear visibility in daylight as well as low-light conditions.

Legendary Ease of Use
Apple has applied its legendary expertise in human interface engineering to make iPod the easiest to use digital device ever. Simply rotate iPod's unique scroll-wheel with your thumb or finger to quickly access your entire music collection by playlists, artists or songs. The

EXHIBIT C2

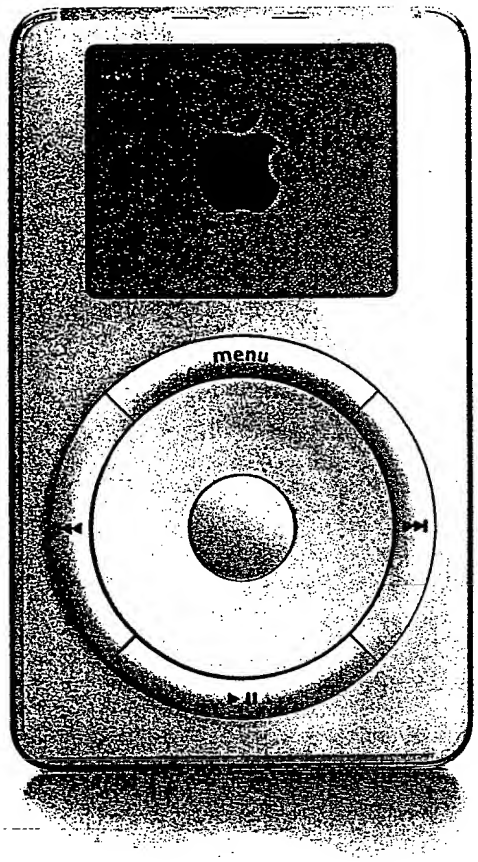
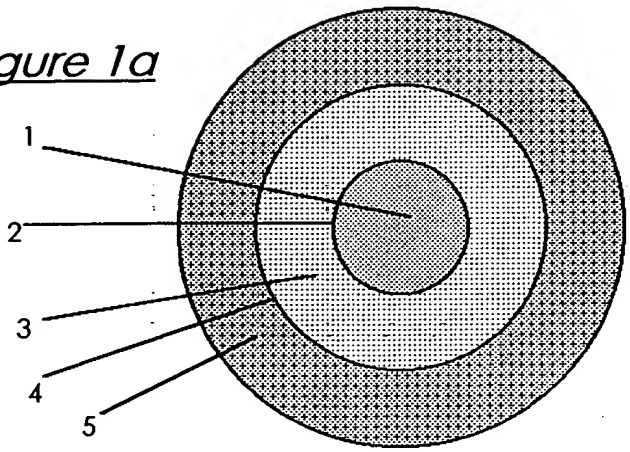


Figure 1a



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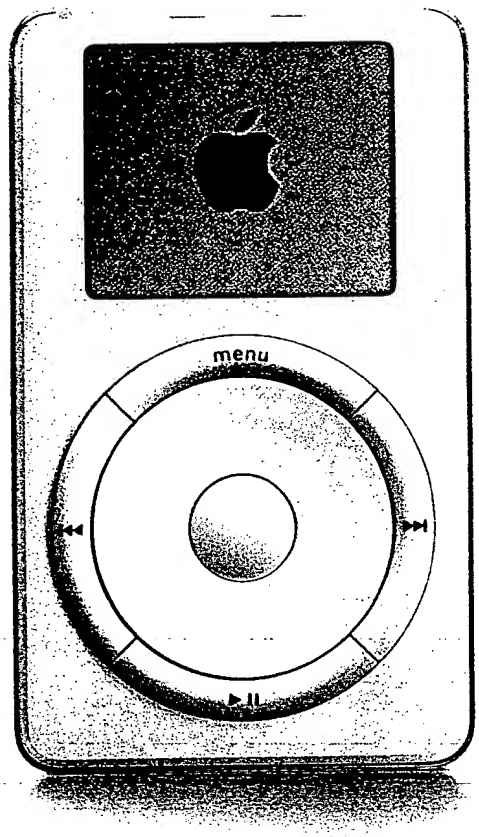
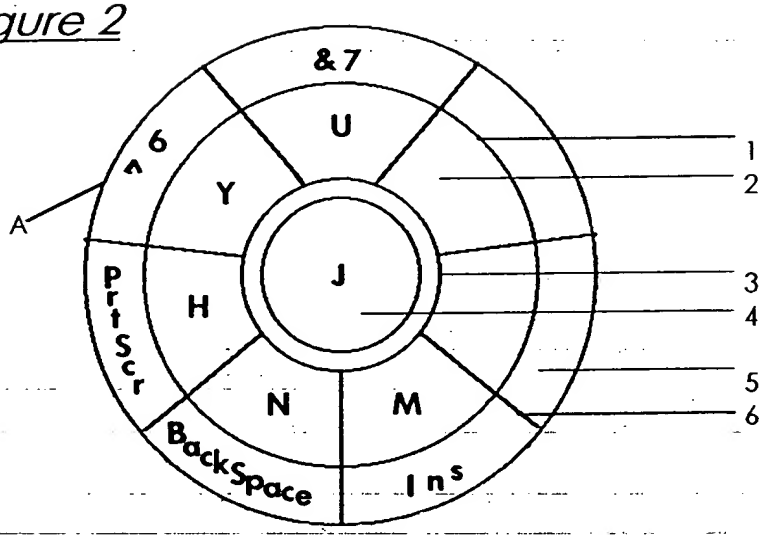


Figure 2



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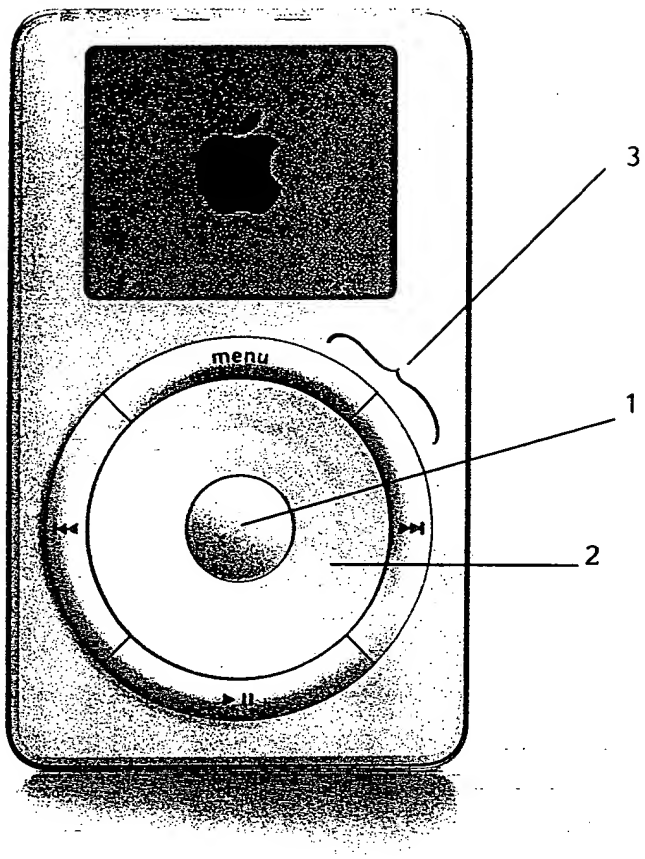

EXHIBIT D1


ou songs,
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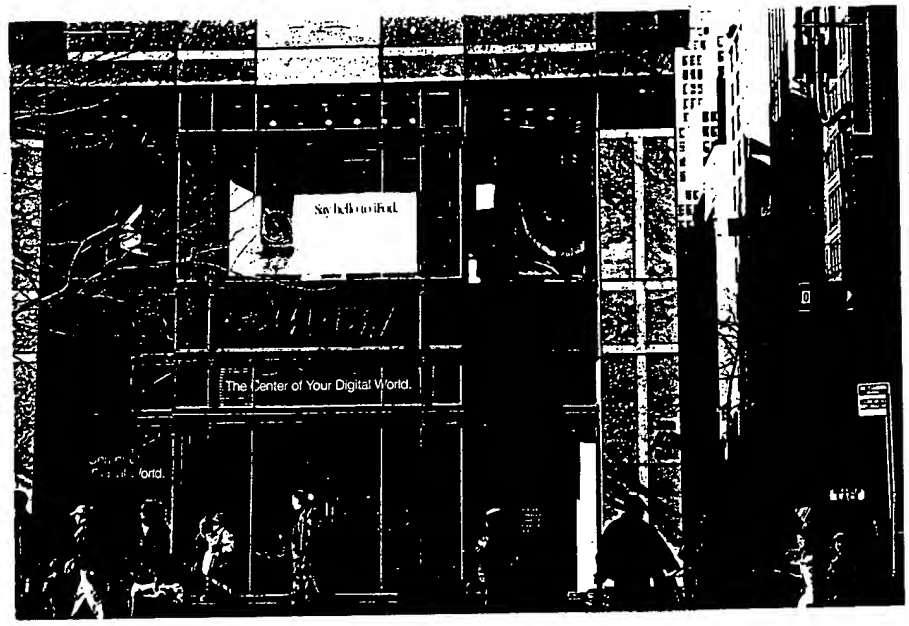
THE CURE FO
THE COMMON CAR.
THE TOTALLY NEW V6 NISSAN ALTIMA.
Van Wagner

EXHIBIT D2



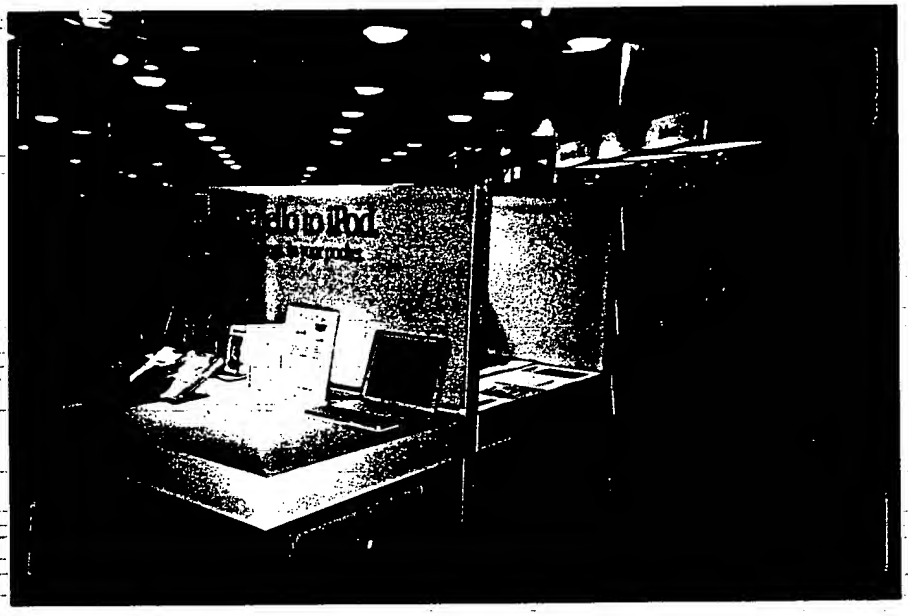
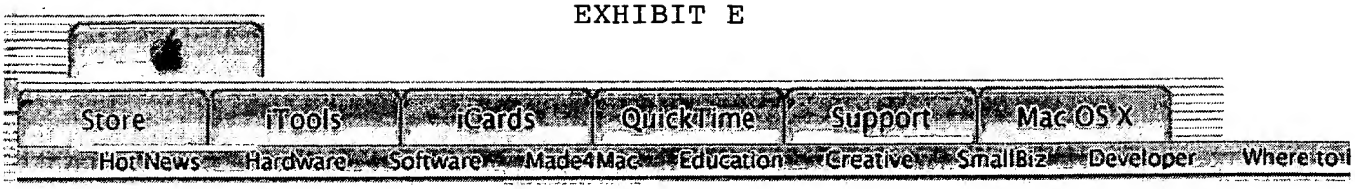


EXHIBIT E



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scroll-wheel makes it possible to hold and operate iPod with just one hand and features automatic acceleration when scrolling through long lists so you can find your music in seconds. iPod also features customizable settings such as shuffle, repeat, startup volume, sleep timer and menus in multiple languages including English, French, German and Japanese. iPod can display song data in any of these languages, enabling users to mix and match songs from all over the world.

Auto-Sync
iPod's revolutionary Auto-Sync feature makes it easy to get your entire music collection into iPod and update it whenever you connect iPod to your Mac. Simply plug your new iPod into your Mac with the supplied FireWire cable, and all of your iTunes songs and playlists are automatically downloaded into iPod at blazing FireWire speed. Then just unplug and go. Whenever you plug iPod back into your Mac it will be automatically updated with your latest iTunes songs and playlists, usually in seconds. There has never been a faster and easier way to always have your up-to-the-minute music and playlists with you wherever you go.

Pricing & Availability
iPod will be available beginning on Saturday, November 10, for a suggested retail price of $399 (US) from The Apple Store® (www.apple.com), Apple's retail stores and Apple Authorized Resellers. An iTunes 2 CD, earbud-style headphones, FireWire cable, and FireWire-based power adapter are all included. iPod requires iTunes 2.

Apple ignited the personal computer revolution in the 1970s with the Apple II and reinvented the personal computer in the 1980s with the Macintosh. Apple is committed to bringing the best personal computing experience to students, educators, creative professionals and consumers around the world through its innovative hardware, software and Internet offerings.

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